

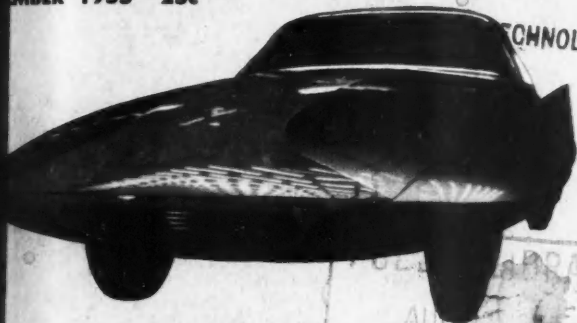
MOTOR

THE TOP CARS OF '55

441-7153
TECHNOLOGY DEPT. 12-55
DETROIT PUBLIC LIBRARY
96 PUTNAM AVE.
DETROIT 2, MICH.

The Best-Handling
The Thriftiest
The Easiest to Drive
The Hottest

MBER 1955 25c



TECHNOLOGY DEPT.

The Engine-Less Ghia-X

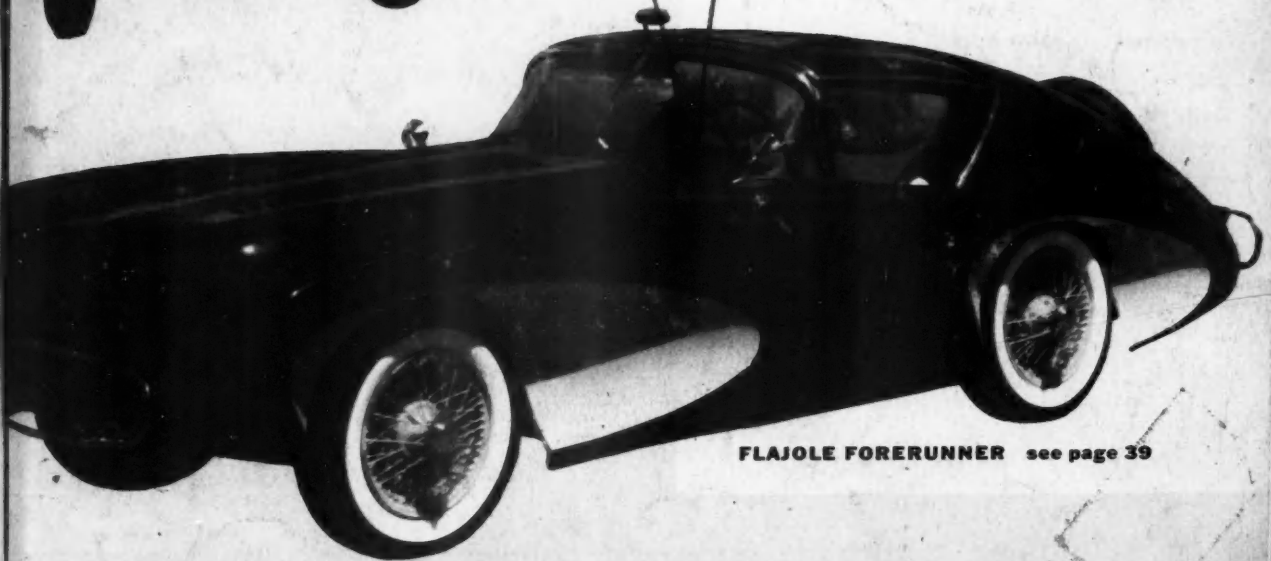
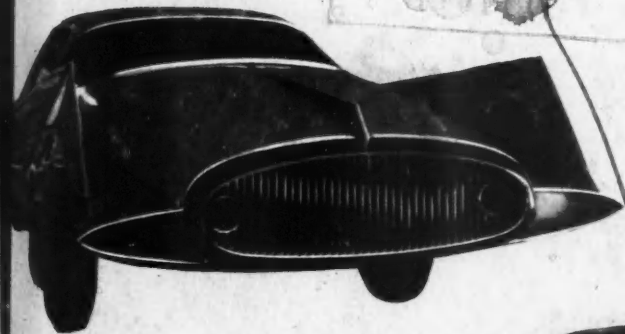
"X" for Chrysler's Gas Turbine?

see page 37

MT SELECTS:

DETROIT'S BEST LOOKING CARS

Who Says Classics Are Great?



FLAJOLE FORERUNNER see page 39

This amazing invention can make your engine last longer without an overhaul, save you up to \$250 in repairs. You never change it. This "miniature oil refinery" is

Guaranteed for 100,000 Miles!

EVERY MILE you drive, tiny diamond-hard particles of carbon and other abrasives work their way into your oil, get between bearing and cylinder surfaces, wear out your engine.

HOW TO STOP THE DAMAGE

Now, after millions of miles of road testing in government, truck and taxi fleets as well as in hundreds of thousands of private cars, engineers announce:

"results are conclusive. Filtering oil through the Life-Time porous bronze element definitely removes 'danger zone' abrasives, prolongs engine life, reduces overhaul and repair costs."

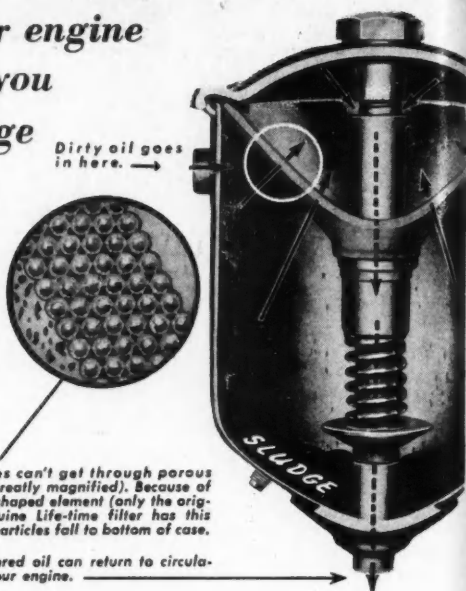
FACTS ABOUT LIFE-TIME FILTERS

Used in supersonic aircraft as well as in cars, the Life-Time filter is made of millions of tiny bronze balls fused into a screen so fine it takes out *all* abrasives in the 10-to-40 micron (390-to-1500-millionths of an inch) 'danger zone' that cause major engine damage.

In addition, this "wonder metal" used during World War II and now adapted for the Life-Time filter actually removes acid-producing water from oil! Yet it

Abrasives can't get through porous bronze (greatly magnified). Because of the cone-shaped element (only the original, genuine Life-time filter has this design), particles fall to bottom of case.

Only filtered oil can return to circulation in your engine.



doesn't soak up any of the valuable additives you're paying for in modern oil.

You never change a Life-Time filter; just rinse it out and use it over and over again. This saves you the cost of throwaway pack replacements, besides what you save on engine repairs, save on oil consumption and gain in the resale value of your car.

TRY THIS AMAZING FILTER AT OUR RISK!

Send us the make and model of your car and we'll send you a Life-Time filter to try in your car. If you aren't convinced within 10 days that it will *save you twenty times its cost*, we'll refund your money without question and let you keep, without any cost, the Magalizer acid neutralizer. Ordering is simple:

1. If your car already has an oil filter, send for a Life-Time Conversion Kit which replaces your present throwaway pack with Life-Time porous bronze. Price: \$6.95 for all cars except Buicks with hydraulic lifters and cars with full flow systems, which are \$13.95 (please send make and number of present filter, if you know it). We pay postage.

2. If your car has no oil filter, send \$12.95 for complete unit, including case and element. We pay postage.

3. Or send only \$2 deposit, pay C. O. D. charges on arrival.

Continental Manufacturing Corporation, Dept. FM-9
Washington Blvd. at Motor Ave., Culver City, Calif.

FREE! ACID NEUTRALIZER \$2.95 Value

Made of magnesium—the "sacrifice metal" that acid attacks instead of steel—the Magalizer acid neutralizer is yours to keep free, without obligation, whether or not you decide to keep your Life-Time oil filter after your 10-day free trial!

DEALERS AND DISTRIBUTORS

Write or wire to find how you can cash in on the "invention that revolutionized the oil filter industry."

Continental Manufacturing Corporation, Dept. FM-9
Washington Blvd. at Motor Avenue, Culver City, Calif.

Name _____

Make, model, year car _____

Present filter make (if known) _____

Address _____

City _____ Zone _____ State _____

Please ship

☐ Life-Time filter conversion kit \$6.95 (full flow \$13.95)

☐ Complete Life-Time filter, with element & housing for \$12.95.

If you live in California, please add 3% sales tax

I enclose ☐ full price; you pay shipping
☐ \$2 deposit, will pay C. O. D. charges



drive the NEW 1955 JAGUAR

*now more than ever...
the finest car of its class in the world!*

NEW redesigned chassis for even greater roadability
NEW larger diameter torsion bars
NEW rack and pinion steering
NEW high lift cams and 190-250 horsepower
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NEW enlarged cockpit — increased leg room

Plus smart new refinements of the same sculptured beauty that made Jaguar the world's most admired motor car. Seeing's believing. Drive it yourself. Call your Jaguar dealer today.

XK-140 Super Sports Roadster...from **\$3465***

XK-140 Super Sports Convertible or Hard Top Coupe.....from **\$3810***

XK-140 "M". Wire wheels, twin exhausts, 2 fog lamps, windshield washers. \$145 additional.

XK-140 "MC". As above with Special Crankshaft damper, "C" type cylinder head. 210 H.P. \$295 additional.

"D" competition model, 250 H.P. available soon.

Laycock de Normanville overdrive optional.

*Port of entry. Price includes heater, tachometer, directional lights, electric windshield wipers, electric clock, automatic back-up light.



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Factory Representatives • 487 Park Avenue, New York City 22, N. Y. • 9155 Sunset Boulevard, Los Angeles 46, Cal.

NEW Reactor Plug DESTROYS ENGINE ACIDS



Automotive engineers have discovered that the corrosive sulphuric acid produced by fuel combustion is the greatest cause of engine wear. Your car engine produces an average five gallons of powerful sulphuric acid annually! It eats away at smooth metal surfaces, forms sludge and carbon, causing gradual power loss and increased gas and oil consumption.

FOR A CLEANER, MORE EFFICIENT ENGINE • Now you can prevent this damaging acid action with a simple, inexpensive crankcase drain plug—the new Reactor Plug. The Reactor Plug embodies a metal catalyst which destroys all engine acids!

Two Reactor Plugs also features a powerful, permanent Magnetic Attractor which traps damaging metal particles—flings, shavings, chips normally resulting from engine operation.

SAVES GAS, OIL AND REPAIRS • With acids and metal abrasives removed from the oil, your engine runs smoother and more efficiently for thousands of extra, trouble-free miles. Sludge, varnish and carbon deposits caused by acids do not form around piston rings, valves, spark plugs and other parts. You enjoy greater gasoline economy and increased horsepower, plus savings on engine repairs and overhauls. A Reactor Plug can save you literally hundreds of dollars during the life of your car or truck!

Check These Reactor Plug Advantages

- Destroys engine acid • Adds thousands of trouble-free miles to engine life.
- Sintered G.E. Alnico magnet traps microscopic "wild" metal particles.
- Self-seal threads prevent crankcase oil leaks.
- Increases engine power, pick-up and efficiency.
- Increases gasoline mileage.
- Makes oil usable longer.
- Saves engine repairs and overhauls.
- Guaranteed for 10 full years.
- Costs less—only \$2.49 for all makes and models of cars.
- Easily installed in 30 seconds when oil is changed.

MONEY BACK GUARANTEE

Install a Reactor Plug at your next oil change. Try it at least 30 days (or until your following oil change). If you don't notice the difference in engine power and all-around performance...if you aren't completely satisfied, return your Reactor Plug for a full refund.

DEALERS WANTED! Exclusive protected territories. Write or wire today.

REACTOR DRAIN PLUG CO., Dept. MT-95
11766 W. Pico Blvd., Los Angeles 64, Calif.

Please ship immediately by return postpaid mail.
REACTOR PLUGS @ \$2.49 each on money-back guarantee.
Check, cash or money order enclosed.

NAME _____
ADDRESS _____
CITY _____ STATE _____

[NAME, MODEL, YEAR OF CAR(S)]

REACTOR DRAIN PLUG COMPANY
11766 WEST PICO BOULEVARD, LOS ANGELES 64, CALIFORNIA

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CONTENTS SEPTEMBER 1955

PUBLISHED MONTHLY VOL 7 NO. 9



ROAD TESTS

- '55 PACKARD 400.....Jim Lodge 21
Past dignity forgotten, Packard offers a colorful package to luxury buyers.
- '55 STUDEBAKER CHAMPION.....Al Kidd 28
Studebaker's watchword is economy—Champ with overdrive has it.

FEATURES

- THE TOP CARS OF 1955.....Mt Research Staff 14
- THE EASIEST CAR TO DRIVE.....19
- THE HOTTEST CAR.....20
- THE MOST ECONOMICAL FULL-SIZED CAR.....20
- THE NEWEST CONCEPT IN MOTORING.....21
- THE BEST-HANDLING AND MOST ROADABLE CARS.....22
- NEW MOOD IN MOBILE MUSIC.....Jim Potter 22
No longer content with squawky, low-fidelity radios, ingenious motorists are exploring new trends in modern listening.
- MOTOR TREND LOOKS AT DETROIT STYLING.....Pete Molson 25
- HOW DETROIT STYLING IS INFLUENCED.....Don MacDonald 26
- THE EDITORS LOOK AT CAR STYLING.....Walt Woron 40
- MOTOR TREND SELECTS BEST-LOOKING CARS OF 1955.....42
- DO-IT-YOURSELF—FIX IT WITH FIBERGLAS.....Al Kidd 44
- ON THE ROAD WITH DUNCAN HINES.....46
New England is the 1st stop on MT's culinary tour of the U.S.
- DRIVING AROUND WITH WALT WORON.....50
Impressions of a '21 Rumpler. Clocking a powerpack Plymouth and Studebaker's Speedster. Air-conditioned Nomad and Dodge. A blown Volkswagen.
- TEMPTED BY A TRAILER?.....Jim Potter 54
- AS THE CLUTCH GOES, SO GOES THE BRAKE.....54
- TIME VS. SPEED.....John Christy 64
How can car A be going slower than car B when both get to the end of the drag strip at the same time?
- WITNESS FOR THE DEFENSE.....Ross A. Brown 68
- A PREDICTION COMES TRUE.....70

THE COVER

Who can doubt that the fantastic Ghia "X," shot by Bill Southworth at the '55 Turin Show in Italy, and Bill Flajole's "Forerunner," Ektachromed by Bob MacKenzie, will have a decided influence on future styling? Starting on page 35, MT brings you 9 pages on styling—including our top choice of the current domestic crop.

DEPARTMENTS:

- EDITORIAL.....6
- LETTERS.....8
- SPOTLIGHT ON DETROIT.....10
- MOTORING TRENDS.....14
- RPM.....16
- CAR OWNERS LIBRARY.....17
- CLASSIC COMMENTS.....20
- MOTOR MELANGE.....54
- TECHNICAL SERVICE.....60
- SELL 'N' SWAP.....72

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I Recommend LODGE



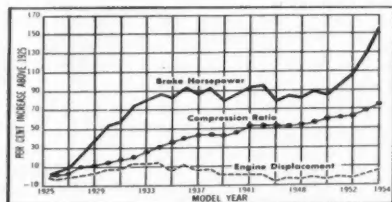
Quality Built in
Rugby, England

Lou Baney's engines have held world speedboat records, have competed at Indianapolis, and in many championship events. Lou's main occupation is tuning fine engines at Yeakel Bros., Los Angeles, the world's largest Cadillac specialist.

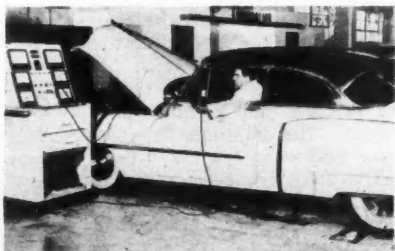
for Peak Performance!

says *Lou Baney*

Famous Racing Mechanic and Expert Tuner.



Trend in engine design. Although displacement has remained constant, compression ratios have gone up and power output has more than doubled. Ordinary plugs cannot span today's wider range of operating temperatures.



Lodge Platinum Plugs increase horsepower up to 14.4% by actual test. Thin platinum points allow more complete combustion, boosting power and gas mileage. Here Baney takes dynamometer readings after installing Lodge plugs.

"Today's passenger cars develop as much horsepower as racing engines did a few years ago. The increased power raises spark plug operating temperatures to a critical point. Plugs with normal heat range burn to a crisp after a few miles of fast driving. The special cold type plugs that will stand high speed, foul up and miss in city traffic. The only plug that really solves the problem is Lodge. In my experience, Lodge plugs perform better and last longer than any other spark plug on the market. I use them in my own racing engines, and I recommend them to our customers."

WHY LODGE PLUGS ARE BETTER

Especially designed for high compression engines and premium fuels, all Lodge plugs incorporate the famous Sintox insulator. Sintox resists detonation and fouling... withstands extreme heat and pressure. Sturdy Lodge regular plugs have chrome-fused electrodes to combat corrosion, and increase service life. The Lodge Platinum Plug has electrodes of solid platinum, in addition to gold-soldered connections, and a diamond ground seal. Lodge Platinum Plugs have double the normal heat range... will last 3 to 5 times as long as ordinary plugs.

WORLD FAMOUS RELIABILITY

Leader in quality since 1904, Lodge is original equipment on Rolls-Royce and Daimler, the world's finest cars. Lodge plugs are available in 87 countries around the globe, and Lodge holds more world speed records than any other spark plug. For greater power, better mileage, and longer plug life, ask your dealer for Lodge... it's the world's finest spark plug.

DEALERS: Excellent opportunities are open! Order through your jobber or write direct for free information on our Jobber-Dealer profit plan. Please mention your supplier's name and address.

LODGE

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20% More Mileage by Actual Test!



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MINISUPERCHARG'R**

**BOOSTS POWER OUTPUT & GAS MILEAGE...
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INCREASING AIR-FUEL CHARGE EFFICIENCY.**

MINISUPERCHARG'R operates on the supercharge principle. Consists of a revolving impeller "blower" & automatic air "breather" valve which mixes an increased volume of air to the fuel charge with whirlwind force. This atomizes and expands the gas molecules so that the improved mixture enters the cylinders in a more powerful highly explosive state... The MINISUPERCHARG'R eliminates over-rich mixtures & fuel waste. Better, cleaner combustion is obtained resulting in reduced "ping", less oil dilution, less valve troubles and longer engine life. Eliminates "vapor lock". Precision built of bronze and aluminum. Easily installed. Satisfaction Guaranteed.

Single Throat Unit for 4 & 6 cyl. cars... \$9.95
Double Throat Unit (for Ford V-8's, etc.)... \$11.95
"Quad" — 4 Throat Unit... \$15.95

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**Get up to 20% MORE POWER
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**FOR CHEV.,
PLYM. & ALL
6 & 8 CYL. INLINE CARS!**

ORIGINATED by Almquist, this SUPER DUAL SET easily converts your standard congested "power robbing" single outlet system into an efficient DUAL system for increased POWER, PEP, SAFETY & GAS ECONOMY! Doubles exhaust capacity—cuts back pressure as much as 75%. Lengthens engine life. Better performance than others because stock heat riser is retained. Lifetime construction. Easy to install. Includes dual head pipe, tailpipe, clamps, hangers plus cast iron split-manifold connector & "Equalizer".

COMPLETE SET for use with stock mufflers \$14.95
SET & 2 CLASSPAC MUFFLERS... \$24.95

SPEED-TUNER

TIMING & OCTANE SELECTOR

Release "Locked-In" Power—boost getaway & mileage! New SPEED-TUNER TIMING SELECTOR "tunes in" top performance as you drive...

A simple pull of dash-mounted switch super-tunes spark timing for PEAK PERFORMANCE & FULL POWER OUTPUT to compensate for changing driving conditions, load, speed, terrain, octane & differences in altitude and weather. NO MORE GUESSING... Instantly ADVANCES OR RETARDS timing to MAXIMUM POWER POINT while driving! Use regular gas. Stops ping! Simple to install yourself. (Doesn't interfere with present automatic advance.) Easy tuning instructions included. FOR ALL CARS, COMPLETE... \$6.95 ppd.

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EDITORIAL

The Human Side of a Machine

THERE'S A GROWING TENDENCY on the part of law enforcement agencies to rely on the use of machinery to tell them whether or not a motorist is breaking the speed limit. In this age of mechanization this is probably to be expected, but we see in its wholesale use a distinct danger to motorists' rights.

The use of radar timing devices has expanded by leaps and bounds in recent months; according to the American Automobile Association, the number of radar units in use (those licensed by the federal government to state and city police and highway departments) increased 46.8 per cent in the 8 months before December, 1954. In Ohio alone, there were over 130.

Why so many, and why are enforcement agencies adopting them? Here's what various agencies answered when we went to them for the answers. "... Because of the accuracy of the reading ... Involves less hazard to the officer ... May be used in all kinds of weather ... The psychological effect on our people ... Less time is involved in apprehension of speeders ... Requires less manpower ... To prevent high speed; chase; wear and tear on cars. ..." All of these are highly logical reasons for substituting radar traps for patrolling, altho all enforcement agencies do not agree on the point that radar takes less manpower. Even so, they see enough advantages to make it worthwhile.

Judicial courts find it much easier to try cases based on radar vs. violator. Judge G. F. Macelwane of the Toledo Municipal Court says that the few who plead not guilty do not base their defense on the drawn-out complaint of the pursuit method, but on the fact that "the operator picked the wrong car." Where the use of radar has been contested, it has usually been on its legality as an enforcement device, plus "it doesn't give the driver a sporting chance!" Motorists have won few cases.

Most law enforcement agencies that have been using radar timing for any length of time have statistics to prove that it has cut down on speeding and accidents (fatal and otherwise). The National Safety Council has come out openly for radar speed meters in enforcement, saying "We feel that it is reliable and accurate, and that it greatly reduces the danger inherent in the old methods of pursuit and racing."

Personally, we take exception to the use of radar for a totally different reason, concurring with Andrew J. Sordoni, AAA president, who recently said, "... More than 85 per cent of the drivers on the road today operate their cars at safe speeds. These speeds may be higher or lower than the posted limit. We believe that it is much better to use radar to determine the average speed of the safe 85 per cent, and make local limits conform to the scientific findings. In the meantime, our association recommends that areas where radar is in use should be posted as a warning to motorists and a deterrent to speed, and that the sets should be inspected periodically to insure accuracy."

Last year the AAA came out with an official observation that "there is grave danger that, unless proper safeguards are provided, these mechanisms may be used for the purpose of wholesale arrests without bringing about improvement in either law observance or accident prevention." A recommendation was therefore passed that "model legislation be formulated governing the use of radar: To provide that such devices shall have been thoroly tested [as to accuracy]. ... To provide for periodic rechecking ... To provide that uniform distinctive warning signs shall be placed at reasonable intervals ... to discourage excessive speeds."

Our conclusions? We don't like the "trap method," be it radar or a cop behind a billboard. The only time we've encountered radar, it was in a trap. And we've heard of it being used this way too often. To us, warning signs of radar timing, plus patrol cars on the highway, are far greater deterrents to speeding. Let's use more common sense in law enforcement and not become victims of the almighty machine.

—Walt Woron

C

Rip

200

U

F



C

We
Bro
our



Cannot channel



Easy to clean



Filters out all dirt



Traps moisture



Never needs replacing



Reduces friction



Increases engine life



Rigid double-cone construction



Waterproof



Saves engine repairs



Unconditionally guaranteed



Easy to install



Saves oil



All-metal construction



Built-in acid neutralizer

End Filter Replacement FOREVER!

with Revolutionary New Type

Micro BRONZE OIL FILTER

1. Eliminates Engine Acids
2. Traps Damaging Moisture
3. Filters all the Dirt
4. Reduces Friction
5. Saves the Detergents

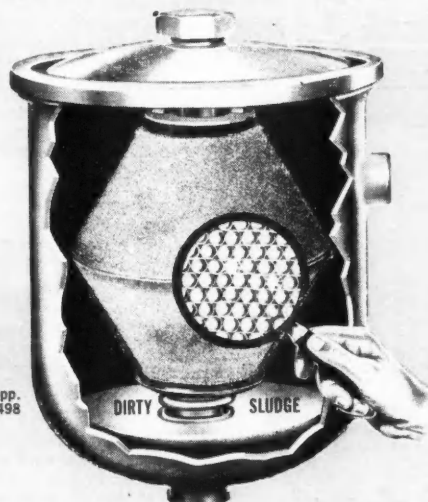
U. S. Patent App.
No. 464498

WHY GIVE YOUR ENGINE HALF-WAY PROTECTION? The Micro Bronze permanent all-metal filter with the built-in acid neutralizer is the world's first filter that guards against all five engine enemies: Acids, abrasives, friction, moisture and sludge.

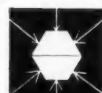
Made of solid but porous everlasting sintered bronze, the Micro Bronze Filter screens out all particles of dirt and abrasives larger than .00023 inch in size (so small you could put a thousand of them on the head of a pin!). The Micro Bronze positively cannot channel or blow up... operates efficiently at all temperatures... never wears out, never needs replacing, merely occasional cleaning.

SAVES OIL CHANGES... SAVES DETERGENTS. Your oil is good for at least 10,000 miles with a Micro Bronze Filter. All the valuable additives are kept in, not soaked up and wasted by the filter. You never need buy another replacement pack as long as you live! Used with modern detergent oils, Micro Bronze will add thousands of miles to engine life, help prevent loss of engine power, save costly oil changes, pack replacements and engine overhauls!

DOES YOUR PRESENT FILTER PASS THE "ACID" TEST? If you have a Micro Bronze Filter with the built-in Acid Neutralizer, your engine is getting the full protection it needs! In a simple test you can easily make yourself, the Micro Bronze special element completely neutralizes acids in 60 seconds!



Saves detergents



Unaffected by pressure



Screens out abrasives



Efficient at all temperatures



Fits all cars



Eliminates acid

THE SINTERED METALS SECRET... Before World War II, the Germans discovered how to fuse microscopic balls of metal into solid but porous form. Following the war, this secret was made available to American industry and we've developed it for Micro Bronze Filters. This is a magnification of the filter wall.

NO EXTRA CHARGE FOR FULL FLOW MODELS

FITS EVERY CAR & LIGHT TRUCK. A Micro Bronze Unit costs only \$6.95, including all full-flow models. Easy to install, never needs changing. Micro Bronze Filter Housing \$9.95 for all cars with no filter equipment (does not include element). Use the easy-order coupon now.

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FILTERS THE DIRT BUT NOT THE DETERGENTS

Micro Bronze Filter Corp., Dept. MT-95

11766 W. Pico Blvd., Los Angeles 64, Calif.

Please ship the following at once

- ☐ Conversion unit \$6.95 (including all full-flow models)
☐ Micro Bronze Housing Unit (Needed where car does not now have filter) \$9.95 (does not include element)

Enclosed is \$_____ full price. Factory pays all shipping costs to your door.

MAKE, MODEL & YEAR CAR _____

NAME _____

ADDRESS _____

CITY _____

ZONE _____

STATE _____

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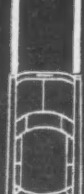
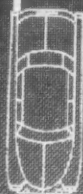
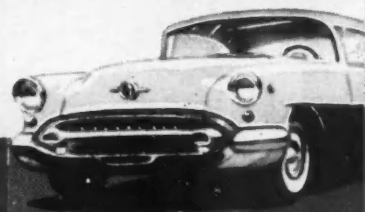
We are receiving orders from all over the world for the amazing Micro Bronze Filter, and are setting up exclusive distributorships to handle our rapidly growing dealer organization. Write, wire or phone.

add more...

POWER!

TO YOUR '55

OLDSMOBILE



WITH THE

Belond
EQUA-FLOW
EXHAUST SYSTEM

CHOOSE WITH THE CONFIDENCE
THE NAME IMPLIES

Whether your V8-powered automobile is an immaculately restored 1935 Ford Roadster or a new 1955 Oldsmobile V8, there is a Belond EQUA-FLOW Exhaust System specifically designed to meet your car's physical specifications and performance requirements. No Belond EQUA-FLOW Exhaust System is placed on the market until it is considered the finest available for the individual car, capable of delivering the maximum of increased horsepower and economy available, through reduction of exhaust system back-pressure.

See your Belond Dealer soon!



Southern California
MUFFLER CORPORATION

11029 Washington Blvd., Culver City 2, Calif.
1801 Spielbusch Ave., Toledo 1, Ohio



CLIPPED

Gentlemen:

Up to the June issue your magazine had been doing an excellent job in properly identifying the 2 new makes of '55 automobiles. Then, for no reason, you began referring to the Clipper as the Packard Clipper, which, according to a reliable source (Studebaker-Packard Corp.), it definitely is not. Nowhere in Packard and Clipper information is the Clipper referred to as a Packard Clipper. Calling it such seems quite unfair to the manufacturer, who is striving to reestablish the Packard name exclusively in the luxury-car class and at the same time introduce a new-make car in the medium-priced field . . .

John Braun

Milan, Mich.

PUZZLED

Gentlemen:

This picture may interest you. I took it behind a motel at Kingman, Ariz.



There were 2 of these cars without any marks of identification on them. Could you tell me what they are?

Hubert Probus
Yes, but we won't.—Editor

San Bernardino, Calif.

SUPERHEATED STEAM

Dear Sir:

A brief comment on the otherwise excellent article in the July MOTOR TREND, "The Steam Car Could Come Back." The statement "there was actually a possibility of a disastrous boiler explosion in . . . the Stanley" is misleading. The Stanley boiler is wound with 3 or 4 layers of high-tension piano wire and the shell is thus of enormous strength. For an explosion to take place all 500 fire tubes would have to rupture at once, which is impossible . . . My authority for making these statements rests on ownership of 7 Stanleys in the past 15 years and at least 100,000 miles of steam road travel.

Stanley Ellis

Waban, Mass.

Dear Sir:

I just finished the interesting article dealing with steam cars . . . In regard to some constructive action on the subject I have a suggestion to make . . . components for a steam car would not be hard to come by if someone would make a thorough search thru the catalogs of industrial equipment companies . . . About the only thing not commercially produced would be the steam engine itself. I am positive that in this country there is some foundry that would be willing to cast a thousand or so blocks for such an engine if they had the specifications to go by . . .

H. J. Hofstad

Hitterdal, Minn.

Dear Sirs:

I have visions of building a steam car but am unable to locate a suitable boiler or engine . . .

Robert Tordoff

Allen, Iowa

Volumes of correspondence have been coming in from would-be steam car builders and enthusiasts. Unfortunately, we don't have the

answers to all questions asked—antique-car clubs are one good source. If we can judge from the enthusiastic letters tho, the steam car just has to come back.—Editor

WE'RE WITH YOU

Gentlemen:

. . . The final burden [for safe driving] is on us, the drivers, to do to others as we would have them do to us, to try to obey all the rules of the road, to anticipate every move as far ahead as possible, to drive within the limitations of our brakes and our lights, and always to be courteous, remembering that the fellow who just cut us off may have a sick baby at home or may be a doctor on the way to a seriously ill patient . . .

Nelson V. N. Dungan
Somerville, N.J.

CRAZIEST CRAZE

Sir:

I believe the custom-car craze is the craziest craze yet to grip the American enthusiasts.

I also believe that a custom car is usually built by an egotistical square who has to be different from everyone else. And, for the most part, it comes out a disgusting conglomeration of wreckage not worthy of gracing our highways. The only custom I ever saw which I liked was the Golden Sahara [MT, May '55], which is a car to be proud of.

Curtis A. Collier

DESIRABLE DIESEL

Dear Sirs:

In your buyers guide for imported cars you mentioned the diesel made by Mercedes-Benz, the 180-D. It caught my eye because I cannot think of any other diesel on the market today in a passenger car. I have seen them here, and have had the opportunity to ride in some. The noise and rough idle are not annoying and cannot be avoided without loss of performance in any diesel. The German cab drivers who own them will swear by them . . .

Pfc. Bruce T. Reich
There are others, notably the Fiat and Standard Vanguard diesels, but the 180-D is the only one imported in any numbers.

—Editor

BACK TO THE GOOD OLD DAYS

Gentlemen and General Motors Car Designers:

Now that Buick and Oldsmobile produce 4-door hardtops why don't they build 4-door convertibles like were built 15 or 20 years ago? It shouldn't be too much of a problem now that they have the 4-door hardtops perfected.

Richard Caplan
Reader Caplan has undoubtedly captured the thoughts of many other readers.—Editor

Chicago

WANTED: VERBS AND ADJECTIVES

Dear Editor:

I have taken your magazine for some time now and have always looked forward to your road-test reports. This is until recently when you have written them omitting some adjectives and verbs. There is no reason that I can see for this brevity. It detracts from ease of reading of the reports. Why not the complete sentences?

Jim McGavran
The revamped road-test style is not so much for brevity as for objective presentation of facts.—Editor

Columbus, Ohio

NO MONOPOLY GAME

Dear Sir:

We have received several inquiries regarding our relationship with the Indianapolis Speedway and the Memorial Day 500-Mile Race.

Firestone has no guaranteed monopoly on tire sales at the Speedway . . . Drivers and race car owners buy their tires from us solely

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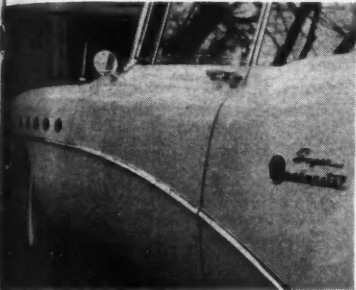
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because of their own preference for our product . . . During the early years of the Speedway, drivers used various makes of tires . . . In 1911 Ray Harroun tried out several brands of tires, chose Firestones and won the race. From then on there was a growing preference for our tires over any competitor's product . . .

W. D. Hines
Director of Public Relations
Firestone Tire and Rubber Co.

FIVE-HOLER

Dear Sir:
Imagine my surprise to come across this



"Super Roadmaster" Buick with 5 holes.
Robert E. Hart Milwaukee, Wis.

A WORD TO THE WISE

MOTOR TREND Editors:
Since I believe many gasoline station attendants like myself read MOTOR TREND, I think it would be of some significance for them to know that the '55 Chevrolet has some unfinished metal work under the flap for the gas filler that is sharp enough to inflict a mean cut when removing or replacing the gas cap . . . Just because it doesn't show on the outside of the body of the car, the integrity of the manufacturers should be such that items like this would be important to them.

Carl Albitz Minneapolis, Minn.

RECORDING MOTION

To the Editors:
Congratulations on your article, "Solving the Ride Riddle." It's about time someone did something about the sad state of affairs. Our cars today have a suspension system that is both obsolete and unsafe . . . I'll continue to be a sports-car enthusiast until Detroit does something about its products.

A. Scroggins Milwaukee, Wis.

REIRE FROM DOWN UNDER

Dear Sir:
I have never had the pleasure of reading your journal, MOTOR TREND, and I would like to exchange some English and Australian magazines if I had someone to oblige me.

W. Matthews Queensland, Australia
MOTOR TREND will forward letters to would-be reader Matthews.—Editor

NEVER TOO YOUNG

Dear Walt:
I am a 12-year-old enthusiast, and a regular reader of MOTOR TREND . . . every reader would enjoy your magazine even more than they do now if you would road test station wagons such as the Nomad . . . On May 20, 1955 I was voted President of the Jr. Suburban Acres Automobile Club in Tulsa so you will probably hear a lot more from me.

J. R. Groom III Hominy, Okla.
Happy to hear from you any time, and we hope the ISAAC enjoyed the August station wagon buyers guide.—Editor

REBIRTH OF A BEAUTY?

Dear Sir:
I think it's a shame that such a beautiful and artistic automobile as the Kaiser should end production. I think that something should be done to stop this. I'm sure there are a lot of people who will agree with me. Peter A. Howes Allen Park, Mich.
Unfortunately, tho we agree, not enough others did.—Editor

THE CRAFTY ARABS

Dear Sir:
I dislike having to miss a copy of MOTOR TREND but it seems like every time I go to the PX here in North Africa they are all out. Finally found the Arab newsstands handle them, so now I'm never without an issue.

Here in Morocco about 95 per cent of the cars are American despite the fact that foreign models are available at almost equal prices. I asked the owners why and here's what they said: American cars are more durable, need less maintenance, ride better, have better style, retain their value and have better workmanship.

S/Sgt. William O. Bohl APO 118

COPS AND ROBBERS

Dear Sir:
Wish to point out a slight error in the article "Whatever Happened To . . ." in the July issue . . . the Peninsular State Bank was a Detroit institution and the building was located on the southwest corner of Harper and Mt. Elliot until it was razed to make room for the Edsel Ford Expressway.

Douglas K. Renny Detroit

Dear Sir:

Referring to page 42, July MOTOR TREND, Hupp 8 shown in bottom picture of page could not have been photographed "outside a Chicago bank." There has never been a Peninsular State Bank in Chicago and the lettering in the window clearly states "Harper and Mt. Elliot branch." Why is it that Chicago, whose crime rate is lower than that of New York or Los Angeles, has to be slapped by such unnecessary connotations and inferences when it comes to gangsters?

Harold Cowen Chicago
No offense intended to nostalgic Detroiters or sensitive Chicagoans.—Editor

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SPOTLIGHT ON DETROIT

by Don MacDonald

"OVER A BARREL" is an oft-used but not-quite-accurate way of describing the situation of the misnamed "independents" (Ford is the only real *independent* because he owns his own company) as it exists today. A better cliché would be "over the hump."

WALL STREET recently has not adequately reflected the remarkable comeback of at least the Packard end of the S-P Corp. in the short 3 years of Nance management. It has not reacted at all, one way or the other, to the efforts of George Romney and his American Motors. Perhaps it is because stockbrokers, in general, do not know the difference between a sparkplug and a piston.

S-P STOCK DROPPED from \$16 to \$10 per share almost coincidentally with the invention of the guaranteed annual wage. Owners of American Motors, eyeing that company's bigger bank balance, remain temporarily unperturbed. The outcome of the current battle between man-of-principle Romney and man-of-just-as-much-principle Walter Reuther remains unpredictable at the moment, but the labor problems of both Nance and Romney are the key to a potential 10 per cent of the market—600,000 vehicles. That isn't alfalfa, but unless concessions are forthcoming quickly, the Big 3 are going to find

themselves in the embarrassing position of being the *only* 3. In other words, there are hurdles still to be hurdled.

AMERICAN MOTORS has already produced twice as many Hudsons and Nashes as it did during the calendar year 1954. The Studebaker-Packard combine has done about as well. Of course, not all of these cars are sold to the ultimate consumer, but at least they are being produced on dealer order—a fact that neither Ford nor Chevrolet can claim at the moment.

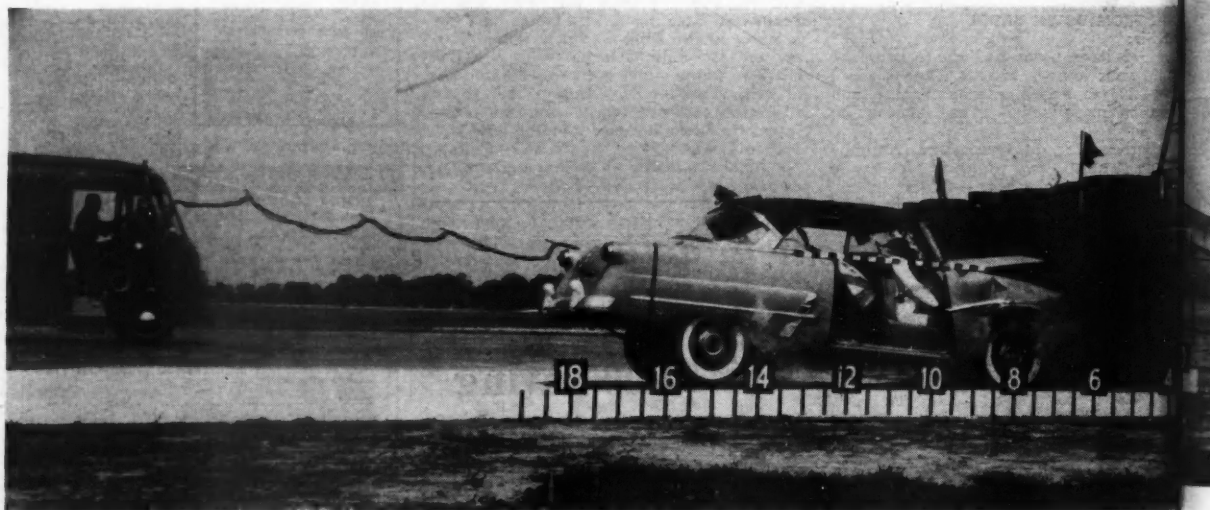
VAST DIFFERENCES EXIST on the surface between the operating philosophies of the 2 companies. S-P's Jim Nance aims at having a miniature General Motors (miniature in this case meaning multi-million instead of multi-billion) with a full line of autos, whereas Romney is taking every advantage of common tooling, also a leaf out of GM's book. Boiling out the press releases, very little difference exists; Nance wishes he had the common tooling, but would design around Romney and his problem, which is product confusion between the outwardly similar Hudson and Nash.

IT CAN BE SEEN that the case for merger is rather dim, not so much because of the basic rivalry between the

2 men, but because merger would mean total product realignment, a problem not yet solved within the separate companies. Both have already doubled the purchasing power, which is a man not so much of advantage as surviving. Both are fundamentally basing the sales efforts on originality of engineering and styling.

PACKARD'S EMERGENCE once again as a truly fine car is balanced by A-M emphasis on the Rambler, which could ultimately develop as the fine car of the low-price field. Tremendous efforts in both in these separate directions have resulted in substantial increases in the secondhand (or "Blue Book") value of both products. This, of course, is what we say that each is over the hump.

THE FORESEEABLE FUTURE of these companies is satisfyingly bright. They will solve their labor problems despite themselves, primarily because Walter Reuther is a very rational man. He knows that GM could produce, for example, American Motors' share of the market by adding only slightly to the GM hourly wage roll. Certainly there is no substitute for a flourishing separate company employing more than 10,000 CIO members in Kenosha, Wis. The same applies to Utica, Mich., and South Bend, Ind., where Packard



The Rumor Mill

"A blue-chip Chicago manufacturer will use the forthcoming Paris show to introduce a new, limited-production, 'boulevard' sports-type car with a Rolls-Royce-like price tag . . ."

TRUE—We understand that this Spohn-bodied gem has been styled by Brooks Stevens, which is gilt-edged security for good looks and craftsmanship. Best U.S. mechanical components will be used for ease of servicing, but the car will contain many engineering innovations, including a retractable metal top. Incidentally, "Mad Man" Muntz has nothing to do with it.

"The Mexican Road Race has been cancelled . . ."

FALSE—For the moment anyway, the race is still on, although postponed to around December 2. Expect factory-supported teams of Chryslers, Chevrolets, Dodges, Buicks, Mercurys (only Merc officially).

"Air-conditioning may soon be standard equipment in the high-priced field . . ."

TRUE—Expect Cadillac to lead the way with this, but not on 1956 models. For the coming year, you'll have minor goodies, such as a power-operated decklid.

"Hydra-Matic will undergo its 2nd major change in 1956 . . ."

TRUE—New design will change gears by valving instead of bands. Expect it 1st on the new Cadillac (if you will remember, Cad had 1st lien on the other major change—dual range).

"Cadillac will have either double fins or Eldorado tail treatment for '56 . . ."

FALSE—'56 Cadillac tail treatment will unmistakably perpetuate their 6-year-old trademark, with no radical departure.

"Plymouths will be sold by separate dealerships before the end of '56 . . ."

FALSE—This is another one of those rumors that 12 months from now might be labeled "true," but meanwhile Chrysler Corp. will struggle along with their current split setup.

"Pushbutton transmissions will be available in 1956 . . ."

TRUE—One of the Big 3 (and it is not the one who dreamed up the Futura) will have them thruout their new line.

"The Chrysler '300' will be dropped . . ."

FALSE—This luxury powerpack has sold beyond expectations and will therefore be continued next year.



All 11 passengers in these Cadillac wagons can see Pikes Peak thru the plastic roof

Studebaker employees, respectively, and in even greater numbers, are located.

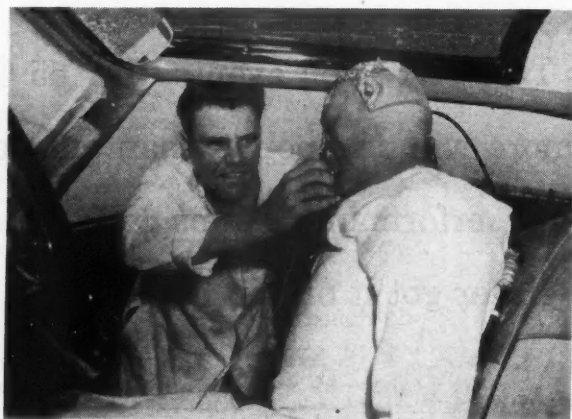
THE COVETED 10 PER CENT of the market is a tough goal, mostly because of our bounding economy. A healthy sign is the fact that the independents' share is up over last year by a healthy 1.07 per cent, exactly the same as that dropped by the Big 3. Within the latter group, both Ford and Chevrolet have dropped nearly 4 per cent each, despite the highest sales in their history. Confusing? Perhaps, except that more people are buying more cars.

FOR YOU IT MEANS that you can buy a car that is different at an ever-diminishing premium, taking into account the overall cost from initial purchase price to ultimate depreciation. Despite the fact that the independents dislike our calling them by that name, we will continue to do so. It is a real honor.

EQUALLY HEARTENING are reports from all quarters on the upsurge of interest in safety. Ford has joined Chrysler in making safety belts an

option on all models. Practically all 1956 cars will have a new doorlatch designed to resist flying open even under stress from severe, head-on collisions or roll-overs. In addition, Ford is carrying on extensive experiments with instrumented dummies mounted in driverless cars that are crashed into a solid timber barrier (at left, below).

THESE MANIKINS are called anthropomorphic dummies because they are scientifically designed to have about the same crash resistance as a human being. Weight and dimensions are those of the average motorist. Their skeletons are steel weldments; their skin and muscle, soft plastic. They can be adjusted so they will be relaxed or tense during impact. Sensitive instruments record any degree of injury from a bloody nose to a crushed skull. Preliminary results of this program have already caused Ford to plug seat belts, and that is only the beginning. Look for extensively padded instrument panels, front-end structure with just the right "crumple rate," and redesigned steering wheels on future Ford products.



Ford's Dearborn track tests safety devices in this sort of intentional crash. Cadaverous dummy announces electrically, via patch of metal foil, when and how he hits car's interior

**WHO'S RUNNING
NUMBER ONE
IN COMPETITION
WHERE "CLAIMS"
DON'T COUNT?**

CHEVROLET 

THAT'S WHO!

In NASCAR* Short Track Division events, this '55 Chevrolet has brought home more winning points than any car in any price class. Engine and performance claims don't count in this league. Here you've either got it or you haven't!

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Chevrolet's got it! Enough high-powered punch to run the pants off competition—*all competition*, including most of the so-called "hot" high-priced cars!

If you've seen a '55 Chevrolet in action this news doesn't surprise you. You've witnessed the swivel-hipped way it handles, breaking through the pack to come lane-hugging, power-sliding through the turns—wide-spaced rear springs holding tight—then digging out with a catapult surge of V8 power! If you haven't—brother, it's something to see. Better yet, put a new Chevrolet through your own paces. Your dealer has one waiting. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



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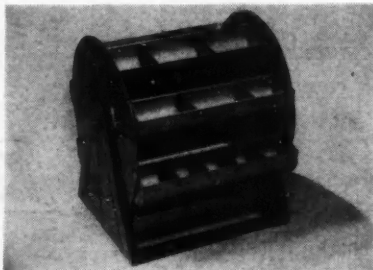
motoring trends



TEL-A-LITE looks like a mobile telephone receiver, is actually a combination spotlight-trouble light with 10-foot cord. Draws only 1/2 amp, throws 300-foot beam. Price, \$12.95 for 6- or 12-volt model. Special boat and plane bracket available. Just 2 connections to make (hot lead and ground). Write California Co., 942 So. La Brea Ave., Los Angeles. Dealer inquiries invited.



GRAPHITE in 2 new Pyroil oils imbeds itself in metals for long-lasting lubrication. Pyroil "M" is designed as an all-purpose oil for protection against rust and corrosion, while "P" is a fast-acting penetrating oil with high lubricating qualities. Marketed in 3-ounce cans at hardware stores, auto supply houses everywhere. Made by Pyroil Co., La Crosse, Wis.



FERRIS WHEEL right in your workshop is the new Kari-All parts assorter. Handy for small parts, it fits on wall or workbench. Flick of the finger rotates the trays, but automatic brake keeps heavy items from always swinging to bottom. All-steel construction, available in 2 sizes. For prices and additional information write Peters Manufacturing Co., Kawkawlin, Mich.



RADI-CARE is a new cooling system cleaner which combines 10 chemicals to fight rust, sludge, oils, greases, and other foreign matter that accumulates in radiators. As a bonus, makers say it will even remove brass tarnish inside the radiator, yet it's gentle enough to be used all summer without draining. Available for \$1.98 from Wong Laboratories, 3259 Madison Rd., Cincinnati 9, Ohio.

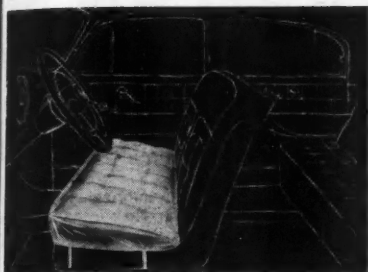


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DETERGENT concentrate for windshield washers is Tabs; just drop one quarter-sized tablet in washer jar of water. Tabs, 1st additive of their kind on the market, are formulated to allow wipers to sweep away bugs, road film and grease. Cellophane envelope with 2 tablets is 25¢ at auto supply stores. Manufactured by Christy Chemical Corp., Worcester 4, Mass.

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PROTECT your car's front seat without hiding the beauty of new fabrics. Coverite is a new "window clear" cover that is easy to install with specially designed hooks and elasticized bands. Wipes clean with soap and water, can be slipped off in a flash for extra special occasions. Orders accepted for any make passenger car or station wagon at \$5.95 each. Lortex Co., 117 Claremont Ave., Mt. Vernon, N.Y.



APPLY HI-GLOSS finish to your car, wash it with a large specially treated turkish towel, wipe lightly with a clean cloth. According to the manufacturers this represents the newest, easiest way to give your car a plate-like protective finish in less time than other processes. For full details write Nu-Col Products Division, Chrisholm Industries, 11 Commercial St., Lynn, Mass.



NO SOLDERING or hammering with the new All-Bronze battery terminal. Installed simply by tightening or loosening one nut, it fits all size battery cables and posts. Recommended for cars, trucks, boats, farm equipment, it's designed not to corrode or freeze to a battery post. Retail price 97¢ each, from Gun Tool Mfg. Co., 373 Columbus Ave., New Haven, Conn.

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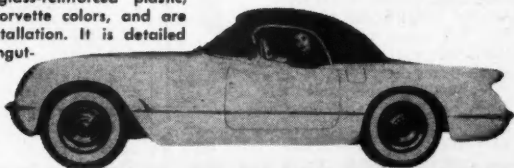
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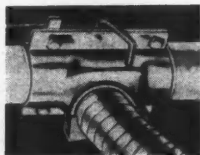
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Pay postage or express on arrival.

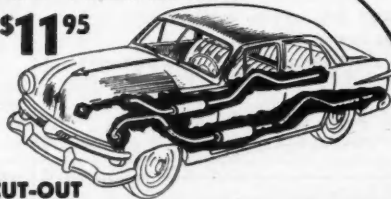
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| <input type="checkbox"/> 2 for \$5 | <input type="checkbox"/> 3 for \$5 |

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A GREAT DAY COMING?

OF THE 2105 BILLS that have been introduced to the Illinois State Legislature this year, one is of special interest to the automotive-minded public. This bill (it passed) stipulates that after June 30, 1956, no motor vehicle may be registered unless it can be equipped by the owner with safety-belt hooks. Almost all cars presently meet this demand and safety belts themselves are not required, only the facility for installing them. It seems like a painfully slow beginning, but where there's smoke there's fire.

TREAT FOR TAUNUS OWNERS

COLUMBIA MOTOR CO. (245 W. 56th St., New York) has announced that, in addition to many other foreign-car parts, it will now begin to import standard parts for the German Ford Taunus. The growing number of Taunus owners will be able to get parts directly from Columbia or its distributors.

WHO'S ON FIRST?

ROLLS-ROYCE, LTD., has entered into an interesting agreement with the Twin Disc Clutch Co. of Racine, Wis. The agreement provides that Rolls-Royce will be licensed to produce Twin Disc's Hydro-Dynamic torque converter transmissions (used mostly on tractors, railcars, and oil well drilling equipment). The agreement also states that the 2 companies will enter into an exchange of information on the subject of hydraulic torque converters. Rolls' interest in the subject is understandable—it's been using thinly disguised (as Rolls-Royce automatic) GM Hydra-Matic transmissions for several years.

ANOTHER LION IN THE STREETS

DESIGNATED "TUR 1," an Austin Sheerline sedan unveiled at Austin's Golden Jubilee Celebration is the 2nd known conventional-looking car to be driving around with a gas turbine engine nestled where a reciprocating mill once pulsed. (Chrysler's turbine-powered Plymouth was 1st to fool the public.) The Austin houses a 2-stage compressor driven by a 3-stage compressor turbine, which, in turn, is followed by a separate power turbine, with a heat exchanger for an economy boost. Output is 125 horsepower. The car has completed thousands of miles of road tests thruout Britain without detection. It appeared at the Jubilee not because it is likely to go into production, but rather "... to give the guests a glimpse of motoring in the future."

TRUCKERS OPPOSE ROAD-BUILDING BILL

A TRUCKING INDUSTRY SPOKESMAN has urged Congress to abandon a highway construction bill sponsored by Rep. George H. Fallon (D) of Maryland which would provide pay-as-you-go financing for nationwide road building. An INS release states that William A. Bresnahan, assistant general manager of the American Trucking Assn., testified that he prefers the Eisenhower administration's bond issue plan (turned down by the Senate and substituted with a plan calling for \$12.5-billion dollars in tax money to be spent in 5 years for building). The opposed bill calls for a 1 cent per gallon increase in gasoline taxes, a 4 cent per gallon

boost on diesel fuel tax. (Each fuel now carries a 2-cent tax.) Bresnahan's only concession to the bill was on the boost in gasoline tax. He held that "the trucking industry firmly believes it is paying its share of the taxes" and that "any increase in taxes should be across the board."

ANOTHER "WITNESS"

THE CALDEA CALENDAR, sent to us by Martin G. Jack, treasurer of the California Driver Education Assn., is basically a compilation of interesting reports on driver education gleaned from every imaginable source, and in the Association's own words, it's published to acquaint its members with "current items in the fields of education, enforcement, and engineering which may improve their instructional techniques." Of great interest to us is the following excerpt from the March-April issue: "A bill requiring that drivers' licenses show any serious ailment that might hamper the holder's ability to drive went to Governor Knight [of California] for his signature today. The author, Assemblyman Richard McCollister, said the bill stemmed from the arrest of a Marin County driver on drunk-driving charges when he actually had diabetes." (The driver referred to here was arrested and jailed, eventually had his license revoked. He appealed the revocation and his license was returned with an order to undergo a medical checkup every 6 months as long as he continued to drive.) The significance of this bill is echoed in "Witness for the Defense," page 68, this issue, which outlines the merits of the Drunkometer, a scientific device which will help to eliminate cases like that cited above. For more information on the "Caldea Calendar," write to Dr. Richard Kaywood, Membership Chairman, 636 Calle Rinconada, Santa Barbara, Calif.

TIGHT LITTLE ISLAND

HUDSON MOTORS' chatty Newsletter passes out some sobering information that probably jibes with your thoughts on the sobering subject: "Mexico City plans to send convicted reckless drivers to an island penal colony 100 miles off the Pacific Coast to serve their sentences..."

THE DISTAFF SIDE OF IT

WE RECENTLY attended a panel discussion on the general subject of what a woman wants when she buys a car. Participating were six females representing all walks of Detroit life (at least those walks which envision 2 cars in the family) moderated by Mary Morgan of CKLW radio and TV. Silent spectators were the predominantly male members of the Motor City's press gang. The idea kind of backfired on the sponsor (Hudson Division of American Motors) because the women didn't seem to know what they wanted. About the only thing they agreed on was that they wanted a small car, but this still had to be "full-sized" enough to allow graceful exit and entry (they complained about modern cars being too low to permit wearing of hats with feathers). Caustic star of the show was Mrs. A. M. Walker, a Birmingham housewife, who, when asked whether availability of air conditioning would be a sales argument to her, pointed out that if she could get her husband to pop for a new 2nd car, there would be no purpose in queering the deal by insisting on air conditioning in addition. Like most prospective 2nd-car owners whose needs are confined to short shopping trips, Mrs. Walker cannily noted that economy exists only in the original purchase price. She did, however, wish that the manufacturers would do something about providing either adjustable pedals, or steering wheel, or both. Between the lines, this reads to us like her hope for a 2nd car of her own is only that.

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car owner's LIBRARY

GENTLEMEN, START YOUR ENGINES

by Wilbur Shaw

Published by Coward-McCann, Inc., 210
Madison Ave., New York. \$5 at bookstores.

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THE LATE WILBUR SHAW'S autobiographical story of his rise from an amateur dirt-track driver to president of the Indianapolis Speedway is a well-written, exciting personal history of his 35 years in American racing. The detailed descriptions of races in which he competed (including the 500-Mile Classics he won) give the racing fan an inside look at the hard work of preparation, the hopes and heartbreaking disappointments behind the track spectacle.

Shaw's friends and contacts read like a roster of the great in the racing fraternity and automotive world. Several photographic sections (unfortunately not arranged in chronological order) and a complete index help the enthusiast identify personalities and events.

The fatalistic approach of the drivers to the frequent tragedies of the track, the losses of their friends, and the mental and physical punishment taken in every race may bewilder the uninitiated. In Shaw can be traced the psychological development of the fierce competitive spirit and stoical disregard for consequence, once he is in the groove, that make a winning driver. Even the skeptic at last can understand the thrill and challenge of the traditional Indianapolis command, "Gentlemen, start your engines!"

—D.K.N.

THE 14-KARAT TRAILER

by Myron Zobel

Published by Frederick Fell, Inc., 386 4th
Ave., New York 16. \$2.95.

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THE FLYLEAF on this book of fact that sounds more like fiction says, "By the time [Zobel] was thru he had built himself a plaything that only King Farouk could afford to take off his hands—and in the end, actually did. The tab came to \$20,000 and for this outlay of cash Mr. Zobel received everything he had bargained for—and much more." That statement is no exaggeration. What author Zobel had bargained for was a \$2500 trailer in which he "could travel in comfort to the 4 corners of the continent." After outlining his plans and making the inevitable changes, he winds up with a \$20,000 land yacht, hauled by a cab-over-engine truck and hired driver. Cramped into its 45-foot interior of Australian satinwood, figured aspen and tufted pigskin are sleeping quarters for the Zobels and their houseboy, a self-contained shower, office, "flying bridge," bar, galley, and ham radio outfit.

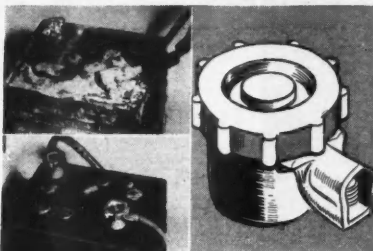
The Zobels then tour the length and breadth of the land, coming upon laughable situations around each bend in the road. While the "Continental Clipper" meets its tight point-to-point schedule, the Zobels remain in the trailer, getting out only to pry the curious onlookers at each gas stop. As the flyleaf says truthfully, "There's a laugh on every page..."

—W.W.

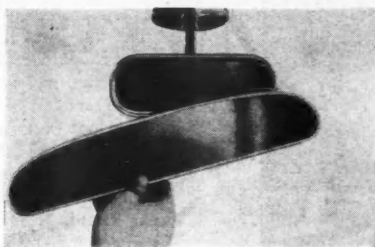
(ADVERTISEMENT)

Wheeling with Deeling

Five Gadgets I Like... By Ray Deeling



Acid corrosion on battery terminals used to be a real—and expensive—headache for me. This corrosion weakened the whole electrical system, and I'd find myself replacing a battery after just a few months of service. Then I heard about the ingenious Battery Booster terminal housings you see pictured above. These housings contain an acid-neutralizing reservoir which eliminates power-sapping sulfation and acid corrosion, increases the efficiency and life of the generator and distributor, and even improves the fidelity of your car radio! Battery Boosters give extra power for starting, lights, accessories. Easily attached or removed in minutes. Price, including two new copper cable terminals, is only \$3.95 per pair. Try a set. They do the job, and are guaranteed to last the life of your car.



There are quite a few "wide angle" mirrors on the market, but most of them sell for anywhere from \$4.00 to \$8.00. Now along comes the See-All Panoramic Mirror for only \$1.49! This is an extra wide, 13 1/4" job, and it really puts eyes in the back of your head. Takes in the entire rear area at a glance, day or night, and doesn't minimize danger by reducing the size of the cars behind. Specially tinted to filter out glare, and it clamps securely in seconds to any

inside mirror. Order several so you can make driving safer for your car-owning friends. The price again: only \$1.49 each, on money-back guarantee.



If you're like me, you get plenty tired of the constant wind roar when you get out on the highway. This Wind Silencer is the answer—it reduces wind noises to a gentle whisper, lets you talk or listen to your car radio in living room quiet. Just snap the silencers on the lead edges of your car doors with the special rubber-shimmed clips—that's all there is to it. Designed by aeronautical engineers. Steel, with chrome finish. Only \$2.98 for the pair, postpaid.

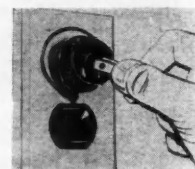
THE EYES

HAVE IT easy day or night with this all-purpose adjustable eye visor. My wife



claims they do a better job against glaring sun and night lights than dark glasses, car visors and tinted windshield glass combined. They don't interfere with regular glasses and are light weight and comfortable to wear. Hinged Visor tilts for use as shade or sun-glasses. Only \$1.00 per pair.

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and
RADIO



This isn't an automotive item, but it's so good that I couldn't resist telling you about it. It's a line filter that stops radio and TV noises caused by motors, appliances, etc. Just plug radio or TV into filter, plug filter into wall, and buzz-free reception is guaranteed. Only \$1.00, including postage.

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| <input type="checkbox"/> Eye Visors (\$1.00 pr.) | Name..... |
| <input type="checkbox"/> Radio-TV Filter (\$1.00) | Address..... |
| | City..... Zone..... State..... |



the TOP

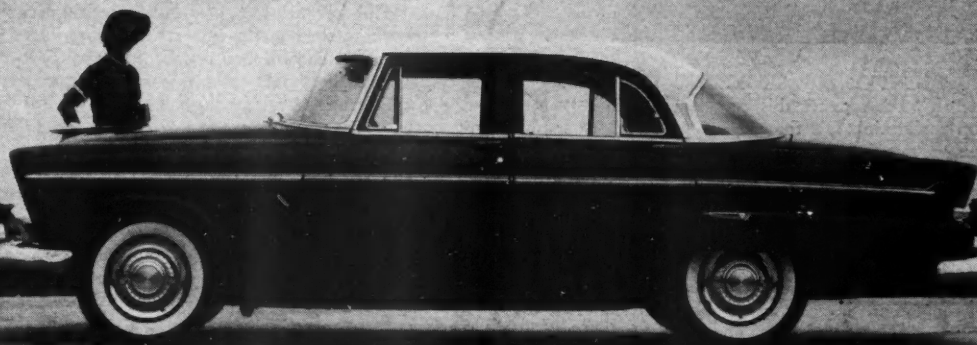
by the MT Research Staff

IN A YEAR LIKE 1955—easily the most exciting, in terms of the number of completely new cars, that most of us can remember—it's unusually tough to pick out the cars that deserve MOTOR TREND's yearly awards. In proportion to its toughness the decision has been more absorbing for the MT Research Staff. The winners have emerged with considerable clarity through the flurry of winding up our 20,000-mile '55 road test program (completed in this issue with the tests of the Studebaker Champion and Packard 400). Where the ratings have had to be subjective, there was little disagreement; a result the more remarkable, perhaps, because we're all human (tho we have readers who occasionally say we're not!) and, naturally, we all have our favorite cars.

Let's look backward a minute: In 1951, when we thought our car should establish itself as absolute king of the mountain, Chrysler's then-new V8 engine and its introduction of power steering were the major factors earning it our 1st Car of the Year award. Next year, on the basis of all-around excellence, Cadillac carried off the prize, with the fine little F-head Willys the runner-up. We gave no out-and-out award in '53, rating the cars, instead, in each performance category but only within their own price class. Yet that proved an unexciting approach, devoid of the very competition that helps to make our cars what they are, and last year we switched to giving definite 1st places in the most important categories, almost exactly as we are doing here. Do you remember who won in '54? The Newest Concept in Motoring went to the Nash (now American Motors) Metropolitan; the '54 Ford was the best-handling and most roadable car; we picked the Studebaker Starliner as the best-looking car of all, and the smaller Buick as the handsomest 4-door sedan. Studebaker Champion was easily the most economical full-sized car, and the Metropolitan the most economical of all U.S. makes (it actually has no competition among domestic makes, and we have omitted the category this year); Cadillac 62 was the hottest all-around performer.

Has the picture changed? Part of it has, and part of it hasn't. But as of now (with '56s about to burst thru showroom curtains) these are Detroit's best.

P cars of 1955



THE EASIEST CAR TO DRIVE—'55 Plymouth with Power Steering

THIS IS A CATEGORY in which personal likes and dislikes will inevitably influence even the most objective approach. What may be a delightful seating position to one man can feel like an upholstered instrument of torture to another.

Exactly what makes a car easy to drive? Ask 10 people, and you will probably get different reasons from each. It follows, then, that many things must be taken into consideration when deciding this question.

We at MOTOR TREND, who drive and test almost all makes of cars, consider these the most important features to judge in this category: ease and natural feel of steering (along with the number of turns from lock to lock), steering-wheel-to-seat relationship, placement and operation of controls, forward and rearward vision, fender visibility for parking, smoothness of operation, and responsiveness in traffic.

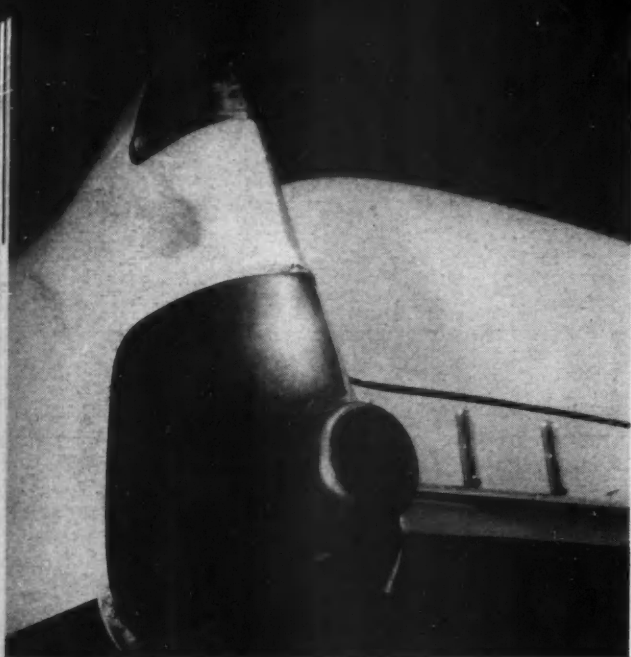
Our tally shows Plymouth to have the greatest number of these desirable features. The car is well designed, comfortable and docile. This is especially noteworthy in view of its obscurity

last year, proving once again what can be done when you, the public, demand it. We are happy to include the 1955 Plymouth in our winners' circle this year.

In choosing the top car, we felt it necessary not to exclude cars with power assists in view of the universal acceptance of these accessories by the buying public. That a car having power steering was selected as winner indicates the usefulness of this type of equipment, when properly designed, in easing the driving strain associated with our overcrowded cities and antiquated, ill-planned highways.

Significantly, engineering research is now designing these power assists as an *integral* part of an automobile rather than as so-called accessories. The car of the reasonably near future will probably be built with many types of highly perfected power assists as standard equipment.

We're betting, then, on U.S. cars to continue to grow easier to drive, hence safer and more comfortable. Next year, we hope, the choice will be harder to make.



JOE MOORE

THE HOTTEST CAR— '55 Cadillac 62

per cent of the top car) is to 90.7. Then we added the figures.

Out of a possible total of 700 points, Cadillac amassed 656.9, even tho it did *not* get 100 points in any of the categories. The important point with this car, however, is the fact that it is consistently good thruout *all* speed ranges; in all columns you'll note that it's either 2nd or tied for 2nd (except for the 30-50 speed, where it falls off). This is mighty consistent performance and Cadillac engineers are to be commended for providing it. An interesting sidelight is the Cadillac's high fuel economy.

The other cars that are bunched closely behind the Cadillac are the Oldsmobile Super 88, the Chrysler New Yorker, the Buick Century and Roadmaster. The Olds seemed to be better in low-speed acceleration, the Chrysler in mid- and high-speed acceleration, and the Century in mid-ranges.

The formula for performance seems to be high horsepower working thru a rear-axle ratio that provides acceleration both from a standstill and in the highway passing ranges without necessarily upping the top speed. We can bear this out by comparing the performance of 4 of the '55 cars that did not have basic engine changes over '54: Ford V8, Olds Super 88, Buick Century, and Chrysler New Yorker. The average 0-60, 50-80, and top speed times for these cars were, respectively, 13.2 seconds, 17.6 seconds, and 103.1 mph. For '55 they are 11.4 seconds (up 14 per cent), 13.2 seconds (up 25 per cent), and 105.1 mph (up only 2 per cent).

Another factor that is quite apparent is that the spread between the performance of low-priced cars and high-priced cars is becoming increasingly less. So is the spread in economy, mostly due to the high-priced cars making great strides in engine efficiency. As one member of our staff said, "That's as it should be. Size and price are also becoming less spread out between the top- and bottom-priced cars."

THE QUESTION OF SELECTING the hottest-performing car of '55 is tougher this year than it's ever been. Among the top-performing cars there is not too much to choose from; no one car stands head and shoulders above all others. And to make the situation even more incongruous, the car that wound up in the top slot, on a percentile basis, was not *the* fastest car in each of the 5 performance factors.

Here's what we did to arrive at our conclusion that the hottest car of '55 among the 4-door sedans tested by MOTOR TREND (for the 2nd year in a row) is the Cadillac 62.

To the 1st car in each acceleration factor and in top speed we assigned a value of 100. The value given to the 2nd car (and all succeeding ones) was determined by proportion; for example, in the 0-60 mph acceleration column Cadillac's time of 10.0 seconds is to Chrysler's time of 10.8 what 98.0 (98

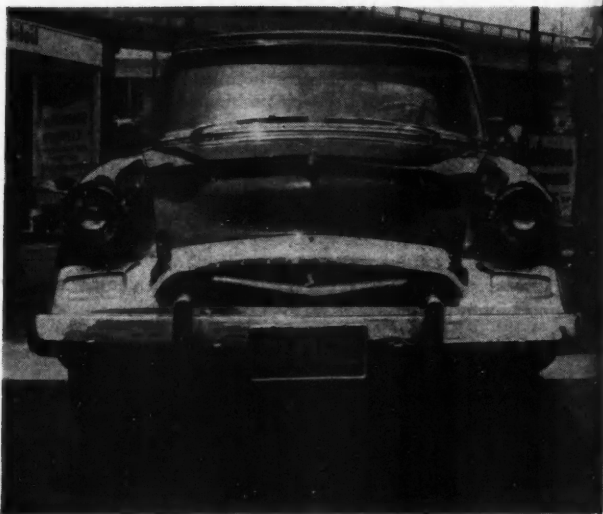
THE MOST ECONOMICAL FULL-SIZED CAR—'55 Studebaker Champion

AFTER CHECKING service and maintenance costs of other popular-priced cars, we felt justified in once again basing this award on gasoline consumption alone. It is usually the largest single yearly expense and the continued gasoline price rise makes it even more important to economical operation.

As in 1954, our fuel checks were based upon steady speeds of 30, 45, 60 and 75 mph over level roads. Our simulated traffic course gave us the average traffic consumption. We then averaged up these 5 figures for each car to compare all cars.

The economy-minded motorist will find this car hard to beat. Average gasoline consumption was 1.1 miles per gallon better than any other car tested while the traffic average, which constitutes better than 75 per cent of all driving, averaged 2.5 mpg more than the runner-up. Based on a yearly average of 10,000 miles, this represents a saving of importance and firmly establishes the Champion in 1st place for a 2nd time.

Fuel consumption, while continuing to be one of the most publicized factors in the industry, continues the downward trend that began with the horsepower race several years ago. As soon as Detroit settles down on this, engine engineers will lend their full talents to improving both engine efficiency and carburetion. Better gasoline will allow higher compression ratios and some form of injection or prevaporization will bring new economy.



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THE NEWEST CONCEPT IN MOTORING—'55 Packard and Clipper Custom

NOT SINCE the introduction of "knee action" springing in 1934 has there been a really new approach to *production* automotive suspensions until this year, when Packard departed from convention by adopting the "torsion-level" ride. Unlike most former concepts of suspension design, this unique principle is of American rather than European origin. True, Packard utilizes longitudinal torsion bars, which have been used extensively in Europe for a number of years, but with its ingenious use of torque arms, the road shock now transfers from wheel to wheel rather than from wheel to frame. This results in a ride that is amazingly stable, and free from the pitch, roll, and jounce usually associated with conventional suspension systems.

While this in itself should have tremendous influence on future automotive suspension designs, Packard has taken another step forward by incorporating in this new suspension another

much-needed feature called a "levelizer" or compensator. Regardless of change in passenger or luggage load, this electrically powered device automatically keeps the car in a level attitude. Aside from greater riding comfort, it adds an immeasurable amount of safety to night driving by keeping the headlight beams positioned properly. No longer will excessive loads angle headlights into oncoming drivers' eyes.

The whole concept of this suspension system is so radical a departure from established techniques that its final approval for production could be one of the most important steps made by an automobile manufacturer in recent years. The courage shown by Packard in breaking the suspension system stalemate will undoubtedly bring safer, more roadable domestic cars to the motoring public in the near future.

Hats off to Packard for the year's newest concept in motoring!

THE BEST-HANDLING



AND MOST RO

HERE IS a case of "duplicate awards in the event of a tie." We know we'll start a rash of owner arguments on this one, but to give a clean-cut 1st to either the Mercury or the Chevrolet we would have to flip a coin.

Why do we feel both cars should share this award? Because they perform equally well. Each has certain outstanding char-

acteristics but in the final analysis, they balance out in overall handling ability.

They both corner well without excessive body lean. When purposely made to break loose, they have ample power and steering response to bring them under control with little effort. Road irregularities have practically no effect on directional control, giving excellent high-speed stability.

Brakes on both cars are good, with Chevrolet having a slight edge. Crosswind has little effect on either of the 2 cars but

Line No.	TEST CAR MAKE AND MODEL	SUGGESTED			ACCELERATION			A CR 10-
		Bare	FACTORY LIST PRICE		STANDING START			
			Transmission	As Equipped	0 30	0 60	¼ Mile	
LOW-PRICE CLASS (UNDER \$2000)								
1	Chevrolet 210 V8	\$1917	Powerglide	\$2096	4.3	12.3	19.4	31
2	Chevrolet 210 6	1819	Overdrive	1927	4.8	15.2	20.0	42
3	Ford Customline V8	1945	Fordomatic	2123	4.5	14.5	19.4	33
4	Nash Rambler 4-door Custom	1989	Overdrive	2093	6.3	21.1	21.5	51
5	Plymouth Belvedere V8	2082	PowerFlite	2260	5.4	13.2	20.3	42
6	Studebaker Champion Regal	1993	Overdrive	2098	5.7	20.6	22.6	49
	AVERAGES	\$1958		\$2100	5.2	16.2	20.4	41
LOW-MEDIUM PRICE CLASS (\$2001-\$2500)								
7	Buick Special	\$2332	Dynaflow	\$2525	4.4	13.8	19.4	39
8	Dodge Custom Royal	2473	PowerFlite	2651	5.2	16.2	20.3	37
9	Mercury Custom	2277	Merc-O-Matic	2467	4.2	11.4	18.0	33
10	Oldsmobile Super 88	2503	Hydra-Matic	2681	3.3	10.6	17.6	27
11	Pontiac Star Chief Deluxe	2362	Hydra-Matic	2540	4.4	13.8	19.7	37
12	Studebaker President	2381	Automatic Drive	2608	3.0	13.2	19.4	32
	AVERAGES	\$2388		\$2579	4.1	13.1	19.1	34
MEDIUM-PRICE CLASS (\$2501-\$3000)								
13	Buick Century	\$2548	Dynaflow	\$2741	3.9	9.8	17.5	30
14	DeSoto Fireflite	2727	PowerFlite	2916	4.3	12.8	19.2	36
15	Hudson Super Hornet	2825	Ultramatic	3024	4.7	12.1	18.5	39
16	Nash Ambassador Custom	2965	Ultramatic	3164	4.5	13.7	19.3	33
17	Packard Clipper Custom	2926	Ultramatic	3125	4.0	11.9	18.7	39
	AVERAGES	\$2798		\$2994	4.3	12.1	18.6	33
HIGH-PRICE CLASS (OVER \$3000)								
18	Buick Roadmaster	\$3349	Dynaflow	\$3349	3.8	10.3	17.6	34
19	Cadillac 62	3977	Hydra-Matic	3977	3.3	10.0	17.6	39
20	Chrysler New Yorker Deluxe	3494	PowerFlite	3494	4.2	10.8	18.0	33
21	Lincoln Capri	3752	Turbo-Drive	3752	4.2	12.4	18.5	34
22	Packard 400	4080	Ultramatic	4080	3.9	11.4	18.6	30
	AVERAGES	\$3730		\$3730	3.8	10.9	18.1	32



**FOR THE TOP CARS IN
ANOTHER CATEGORY,
See Pages 42-43**

OST ROADABLE CARS—'55 Mercury and Chevrolet

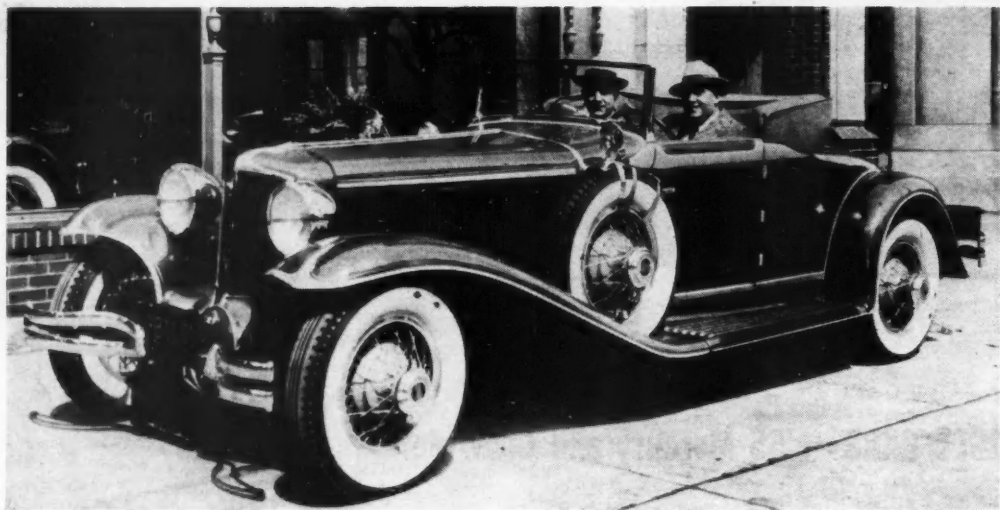
overall is somewhat less noticeable in the Mercury at higher speeds. Dirt or gravel roads produce no handling problems, nor do road shoulders or streetcar tracks. The front-end suspension of both cars has an inherent stability, making them reasonably solid under varying conditions. Neither is a sports car, but they can give many sports cars a run for their money.

Detroit's recent efforts to improve roadability seem to be paying off. Today's cars handle better! Their stability has shown marked improvement, especially in steering and cornering.

That mushy feeling, so long associated with the American automobile, is gone. In its place is beginning to emerge a feeling of solid sureness, a willingness to be steered, not aimed. These are all heartening characteristics. Continued effort along this line by Detroit will eventually produce a car worthy of the manufacturers' capabilities.

And there you have it! *TWO* fine all-around performers, equally deserving of being chosen the best-handling and most roadable car of 1955!

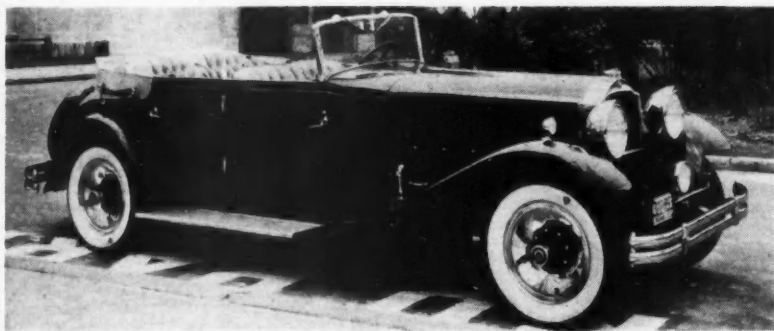
Mile	ACCELERATION				TOP SPEED	FUEL CONSUMPTION						STOPPING DISTANCE				Line. No.
	CRUIISING SPEEDS	10-30	30-50	50-80		30	45	60	75	Traffic	Avg	30	45	60	Avg.	
19.0	3.1	4.4	15.5		97.3	20.6	19.2	15.8	13.8	13.7	16.6	33	82	146	87	1
20.0	4.2	7.4	18.6		95.4	30.2	27.4	21.2	16.6	16.9	22.4	33	82	146	87	2
19.4	3.3	5.7	19.8		95.2	18.5	17.4	14.0	10.9	11.9	14.5	33	82	178	96	3
21.9	5.1	9.7	29.3		83.6	30.8	24.7	20.9	17.4	21.0	23.0	37	86	152	92	4
20.3	4.2	5.5	16.2		98.4	18.7	17.1	15.2	13.0	12.8	15.4	30	81	173	95	5
22.8	4.9	8.8	36.6		85.4	33.1	25.6	21.7	17.7	19.4	23.5	38	87	150	92	6
20.4	4.1	6.9	22.7		92.6	15.3	21.9	18.1	14.9	15.9	19.2	34	83	158	92	
19.0	3.9	6.1	17.2		104.1	23.3	19.4	17.6	15.0	12.7	17.6	41				7
20.3	3.7	7.9	15.3		101.8	21.5	20.1	16.8	13.9	14.3	17.7	43	88	152	94	8
18.0	3.3	5.3	13.8		105.3	20.6	19.9	16.2	13.4	12.7	16.6	43	93	153	96	9
17.4	2.7	4.5	11.3		109.7	24.4	20.1	16.4	13.9	11.8	17.3	39	92	165	99	10
19.7	3.7	6.2	17.4		100.3	21.9	20.1	17.4	13.6	14.5	17.5	44	93	167	101	11
19.4	3.2	6.2	14.9		104.8	22.6	22.1	18.5	14.1	15.9	18.6	44	101	174	106	12
19.1	3.4	6.0	14.9		104.3	23.1	20.3	17.2	13.9	13.7	17.6	42	93	162	99	13
17.3	3.0	4.4	11.7		108.5	19.3	17.9	16.0	14.2	11.6	15.8	44	99	163	102	14
19.3	3.6	4.9	14.3		103.2	19.7	18.2	15.7	11.9	12.4	15.6	39	90	146	92	15
18.5	2.9	6.0	15.1		105.0	18.0	17.2	15.3	12.1	10.9	14.7	39	75	150	88	16
19.3	3.3	6.7	15.0		102.1	19.5	17.2	14.3	11.1	11.4	14.7	40	73	148	88	17
18.7	2.9	4.6	13.9		103.3	19.1	18.7	15.8	12.9	11.9	15.7	44	89	151	93	18
18.4	3.3	5.3	14.0		104.0	19.1	17.8	15.4	12.4	11.6	15.3	41	86	152	93	
17.4	3.4	4.6	12.0		109.2	20.1	18.8	17.0	14.3	12.4	16.5	41				19
17.4	3.9	4.8	10.3		111.3	24.4	21.5	17.9	15.0	12.9	18.3	40	91	161	97	20
18.6	3.3	3.9	9.9		113.5	20.2	17.9	15.5	13.1	11.9	15.7	40	88	171	100	21
18.3	3.4	5.3	13.7		104.1	18.5	17.1	15.2	12.2	12.9	15.2	41	93	167	100	22
18.4	3.0	4.5	13.3		110.1	18.4	16.3	14.6	12.5	11.3	14.6	44	89	151	93	23
18.1	3.2	4.6	11.8		109.6	20.3	18.3	16.0	13.4	12.3	16.1	41	90	163	98	



Often overshadowed by the 810 and 812, the L-29 Cord is a classic in its own right (for better or worse!)

Classic Comments

What's So Great About the CLASSICS?



Unusually graceful LeBaron body atop the nearly unmaligned Packard chassis

Are they classic just because they were powerful for their day? How much of their fame was due only to advertising? What are some of the defects in the "greatest" classics? A puzzled anonymous reader gets his questions answered

by Robert J. Gottlieb, Classic Car Editor

THERE ARE many things about classics I don't understand. Before you answer any questions, let me warn you that I will use any of your statements I can to prove you are wrong. Is that agreeable to you?

Yes!

What, in your opinion, is the most important element in the definition of a classic?

In 1953 I applied the following definition to a classic: "A classic car is a distinctive car manufactured with quality materials and superb craftsmanship. It is a practical car, outstanding in appearance, performance, dependability and utilitarian value. The exceptions do exist, it is usually large, powerful, open body, luxury car that was manufactured from 1928 to 1935 and a model which was expensive in price and produced in limited numbers."

At that time I merely placed most stress on the element of appearance. The scope of classicism has changed greatly in the past 2 years—even in the past 6 months—and I firmly believe that the element of distinction is the most important today. Two years ago, enthusiasts bought the best looking classics they could find. Today there are many more restored classics than there were 2 years ago, and most of them

are beautiful. For the 1st time more prestige is going to a distinctive car than to a beautiful car.

It isn't cricket to pick your definition to pieces, but the Rolls-Royce was not a powerful automobile and is generally associated with being a slow car. I recall a statement you once made that every Rolls-Royce was a classic.

I am not sure that my definition of 2 years ago is the best definition today. That was one of the reasons for our July Classic Car Definition Contest. In the original definition I prefaced the requirements of power and an open body with a reservation that exceptions exist. Rolls-Royce is universally thought of as the finest in motor- ing production. It achieved its status because it was so quiet, so dependable and generally so regal in appearance. It is true that it is one of the slower cars referred to as classic, but it was and is so outstanding in other respects that many people consider it the ultimate. Let's look at the problem in another light: Can you name any automobile that is considered classic merely because it was a fast car? Also, what is a fast car? Do you mean high top speed or fast acceleration?

I suppose you're right—I know of no car which is classic merely because of acceleration or unusually high top speed. But if a car has outstanding acceleration or top speed, would it not rate a higher score in this nebulous field of classicism?

Every owner is justly proud of outstanding acceleration or high top speed. We have many sports cars and hot rods built primarily for these singular purposes. In the classic field a car is more desirable if it has outstanding acceleration in addition to the other attributes of a true classic, but experience has shown that in almost every case where a manufacturer built a fast, powerful automobile, the purchaser has suffered from a lack of dependability. That element of dependability disappears when highly stressed components enter the picture. Mercedes-Benz and Duesenberg are 2 well-known fast cars. They are both noted for acceleration and top speed. They are also noted for complicated timing, valve and carburetion problems. These massive, well-built engines require frequent expensive and complicated repairs if they are pushed. The situation is somewhat analogous to the constant tuning required on contemporary Jaguars that are used for racing purposes. The problem differs only in respect to the cause (the modern Jaguar engines' high rotational speed in comparison to the low rpm of the classic engines). Speed alone has never made a car a classic. But a classic has more appeal if it is fast.

I know you are partial to the Chrysler Imperials of the early 30s. How can you consider these cars classic when they are inexpensive production models, slow and lumbering, and far from outstanding in appearance? I have also heard that Chrysler Imperials have de-

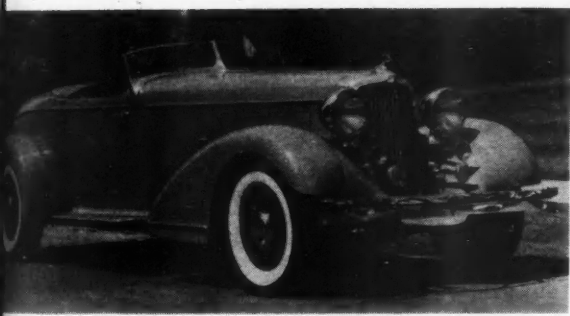
fective transmissions and that an owner never knows how long the gears are going to last.

In determining whether or not a car is a classic a comparison must be made of the performance of the car in relation to other products of the same era as well as to modern standards. When the Chrysler Imperial is compared to early-day products it is not slow and lumbering. Only a small handful of cars could outrun it. Naturally it would be considered slow if compared to today's cars, but the early Cadillacs, Pierce-Arrows and even Marmons would lag far behind a '55 Oldsmobile, Chrysler or Thunderbird.

You are partially correct in your assumptions. I do not think that the production Chrysler Imperials of the early 30s are classic, but I do think that the custom Imperials are classics. The custom Imperials were much higher in price, were constructed more firmly, were far better looking, and even had an entirely different engine. The addition of these factors to a basically good car created classicism.

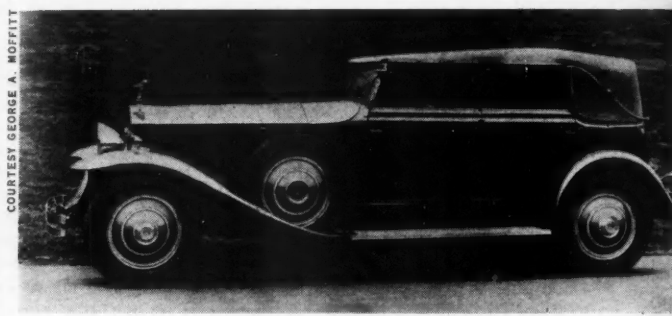
All Chryslers were dependable cars. It is true that the 4-speed transmissions created many problems, but the factory replaced defective units free of charge. The replacement boxes were 3-speed affairs and gave very satisfactory service. The entire situation is simple: a defective unit was installed in the car. Such situations exist even today. Many modern-day manufacturers build cars with defective units

Photos courtesy Automobile Manufacturers Assn.



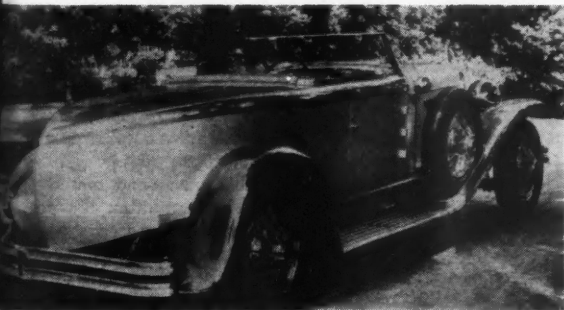
COURTESY CHRYSLER CORP.

One of the last classic Chrysler Imperials, also by LeBaron

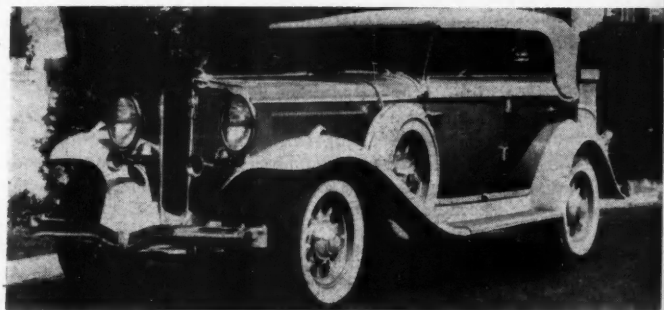


COURTESY GEORGE A. MOFFITT

King of them all? Rolls-Royce comes in for criticism here



Ponderous boat-tail Duesenberg meets "distinction" criterion



Studebaker, oddly, meets almost any definition of a classic

which require replacement or overhaul within a short period.

Don't you think that some of this aura of impregnability surrounding classics is due to the original advertising claims of classic-car manufacturers?

Definitely yes! The advertising departments of the early-day manufacturers created sales appeal in a manner entirely different from the advertising used today. Fabulous claims were made for the early-day cars. Although many were untrue, the claims and slogans were accepted by the public. Even manufacturers of non-classics approached the advertising field in an unusual manner. In the mid-30s Pontiac advertised its engine, "Built to last 100,000 miles." Chevrolet advertised, "So good it [the engine] never wears out."

You say these claims were unfounded. Do you mean they were untrue?

In many instances advertising claims were untrue and in many others subtle deceptions were practiced. In any event they added up to sales; this was necessary when there were 10 times as many manufacturers in business as there are today.

What do you mean by "subtle deceptions were practiced"?

I had reference to an early-day manufacturer who mounted a cover on top of a standard L-head engine so that a viewer would believe the car had an overhead-valve engine. There were many other examples. Stutz pushed its 32-valve engine because there was insufficient money in the treasury to manufacture a 12- or a 16-cylinder engine. I imagine that these examples were considered good advertising and salesmanship. Weymann built many bodies out of cloth. They held up well and they looked good, but how would you like to be in a body built of cloth when it was clobbered by a Mack truck?

Now you are getting to the crux of my view. There is another side to the theory that the classics are the greatest cars ever built.

Very true. Almost every famous classic had defects which would not be tolerated by modern-day purchasers. Yet the cars had so many other remarkable attributes that classic-car owners tolerated the defects.

Can you get more specific? I would like to purchase a classic and, naturally, want to be warned in advance of these defects you mention.

The Cord front-wheel-drive cars developed a minimum of trouble with proper maintenance; without proper maintenance an owner was in serious trouble. Frequent lubrication was necessary and so was constant inspection. Contemporary automobile purchasers are unwilling to devote the time necessary for normal maintenance. This is proved by the return of one-shot lubrication on modern cars, as pioneered by Lincoln and Mercury. I say "return"

because one-shot lubrication from the driver's seat was frequently built into classics.

The construction used in the engines of many classics required extreme care and precautions. Many manufacturers screwed, then wedged the cylinders into the blocks. Hispano-Suiza is an example. This was very satisfactory as long as the engine was operated under normal driving conditions. If the engine was overheated and run for an extended period, the block would expand, would break the seals, and water would pour from the block into the crankcase. There isn't any satisfactory repair for a situation of this type. A clogged radiator, a broken water hose, or even a broken key on the water pump propeller shaft could ruin an engine in a matter of minutes. I suppose I could pick every classic built and point out the difficulties. If we assume that the Studebaker President is a classic we can point to the transmission as the troublesome spot. The fabulous Mercedes and Duesenberg required constant maintenance and were built in such a manner that maintenance was very difficult. It was extremely hard to reach components which required service. Marmon enthusiasts dislike to admit it, but many Marmons develop leaks in the rubber seals installed between cylinders and block. Bugattis and Isotta-Fraschinis have a nasty habit of leaking water into the crankcase. In many cases the cost of repair is prohibitive.

I gather then that the classics could not compare to modern products.

It depends on the light in which you view an automobile. Many believe that the classics far surpass modern products. Careful maintenance and a knowledge of a given car can overcome or forestall possible breakdowns. Modern cars also require maintenance, though of a different nature. Pushbutton windows, automatic transmissions and many other modern features must be regularly serviced to avoid expensive repair bills.

How can you consider the appearance of a classic to be the equal of any modern-day body?

Appearance is and always will be a matter of preference. I can understand how some people prefer the so-called streamlined products of today to the functional design of the classic. To the majority of people the classic design is old, obsolete and outmoded. The '55 Buick, De Soto, or Mercury is thought of as new, modern and streamlined. The public believes that the modern body shell is the most advanced design that can be built. In short, the public is accustomed to modern design.

What do you mean by "functional" classic design?

Perhaps a better adjective would be "useful." The bodies were built with a purpose in mind. The sports cars had com-

partments for golf clubs and small luggage. Limousines incorporated bars and other refinements. The builders had a definite purpose in mind and the cars were built to fulfill the purpose, yet the changes from one model to another were slight.

I can't agree that classics were functional. A casual glance shows that much space was wasted, and when compared to a modern car there is no comparison in passenger and luggage space.

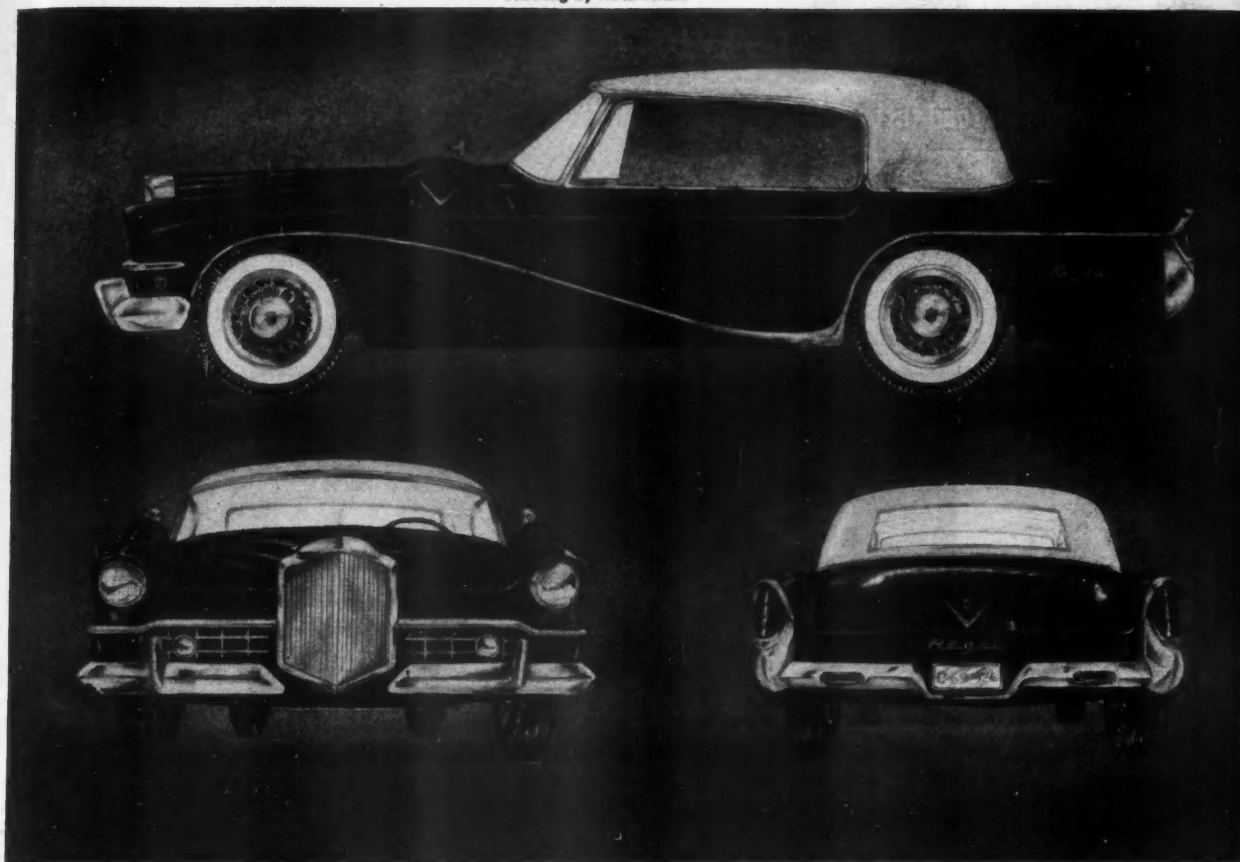
Before comparing space consider important mechanical differences. Classics generally had huge, large-displacement engines and, except for a few V8, V-12 and V-16 designs, the engines were in-line affairs. This required a long hood. All modern engines are compact and small in comparison. In the early 30s 17-, 19-, and 21-inch tires were not unusual. Most modern cars use a 15-inch wheel, and some '56s will be even smaller. Naturally, fender surface required to cover the smaller wheel is less. The classic-car builder got as far as he did by eliminating overhang, which really serves no useful purpose.

The classic and contemporary body styles each have advantages and disadvantages. Three can ride in the front seat of a new Cadillac much more comfortably than in the front seat of a 1930 Cadillac. Consider, however, the amount of the bills incurred if a sideswipe occurs. A \$20 repair bill could conceivably repair a classic while \$500 would not cover an identical accident to a modern car. Finally, the element of safety must be considered. Many safety engineers bemoan the disappearance of the heavy frame rails and heavy runningboards used in the old days.

I will admit that many classic bodybuilders wasted space, lots of space. On the other hand, much space is wasted in modern products. It is difficult to justify the use of pontoon fenders on early speedsters and '36 and '37 Cords. It is also difficult to justify the loss of space resulting from a boat-tail. I have noticed, however, the demure return of the pontoon or fender bulge on many new cars. The Mercury and Lincoln are good examples.

Was the use of inlaid wood and other "niceties" the primary reason that classics were so expensive?

Not necessarily. The niceties all added to cost, naturally. But classic bodybuilders went overboard in another direction. They built components to last hundreds of years. Doors and hoods would far outlast the life of the car. Present-day manufacturers have discovered that a door or a hood can be built of thin metal and that there is nothing to wear it out. But the practice of cutting costs and cheapening construction has reached a point where car manufacturers have had to brace doors, hoods and other parts of the body to avoid serious vibration resulting in cracked metal



If there were a classic among the '55s, would it look like this?

**Will the classics ever come back?
Will any cars built today be classics?**

In order for classics to come back, 3 things will have to occur: (a) Present-day merchandising methods will have to change. Manufacturers have designed their products so that an automobile can well be replaced 3 years after its purchase. During the 3-year period the car depreciates almost fully. It's constructed so that with normal use it is not economical to repair, and because of 3-year intervals in body styling changes, it's obsolete in appearance. (b) Economic conditions must change so that purchasers have the ability and are willing to pay 4 or 5 times the price of the average car. (c) There must be a concurrent return of desire and ability on the part of manufacturers to create superior products from superior materials. Classics must be distinctive and out of the ordinary, hence the production lines will play but a small part in their creation.

Most likely none of the American cars built today will be considered classic in the future. This statement will definitely be true if cars progress from a mechanical design and engineering standpoint in succeeding years; and we have every reason to believe that they will. Assume, however, that design, performance and construction deteriorate in the immediate future. If this happens, 1957 and 1958 cars, as an example, would be inferior to the 1955 models. By 1975 the 1955 cars would be considered superior and advanced for their time, hence they could become classics.

Never before in automotive history has there been a time like the present when automobiles are so alike in design and construction. Basic body shells and/or designs are used by every major manufacturer, and modifications in the form of fenders and trim create the greatest difference between other cars and the best. If classics are prestige cars, we must examine

the Cadillac, Chrysler, Lincoln and Packard. Similarities with less expensive lines are immediately apparent. Of course, the prestige cars accelerate a little faster, have a higher top speed, and are larger than the low-priced cars.

Some of the Fiberglas and custom-built cars manufactured today may be considered special interest cars in the future, but they too lack a majority of the elements found in a true classic. In Europe many cars are presently being built which, with the passage of time, may be considered classic. Time alone will tell the final answer, but it is almost a certainty that certain classics of yesterday still in production in Europe today will not be on the approved list.

Unfortunately, a few of the old established European manufacturers are relying on past performances and achievements. Insufficient mechanical and design advances will relegate their present products far into the background.



'55 Packard 400

Past dignity forgotten, Packard offers a colorful package to luxury buyers



Handsome Packard 400 blends well with any setting, denotes class, quality in a way different from long-hooded models

by Jim Lodge

Photos by Joe Moore

DISCUSSING PACKARD as a prestige car, we're often inclined to dismiss the newness of the '55 and think only of this top model in the light of Dietrich 12s. The '55 Packard is something really different in the high-price class, so let's forget the cormorants perched atop long, high hoods, and take a look at the things MT learned about this new Packard.

Test car: Packard 400 hardtop, Ultramatic (standard equipment), optional power steering, power brakes, pushbutton windows and seat, radio, heater.

Engine: Differs from 245-hp Clipper Custom engine described in June MT only in exhaust system. Packard's system, optional on Clipper Custom, is true dual system (no crossover pipe). Uses same 4-barrel Rochester carburetor, Clipper's hydraulic valve setup, 8.5 to 1 compression ratio for 260 horsepower.

Other options: All conceivable extras, including air conditioning. Engine option

limited to buying another model—superb "limited edition" Caribbean convertible with 275 horsepower.

While smaller than '54's 359-cubic-inch straight 8 in displacement, lighter by 54 pounds (64 counting radiators), and 8 inches shorter, 352-cubic-inch short-stroke V8 has 22 per cent more horsepower, 7 per cent greater torque, 25 per cent more valve head area, 29 per cent decrease in friction-horsepower loss. According to Packard, this V8 is "... potentially capable of being enlarged beyond the displacement obtainable with any other 1955 automotive engine, indicating extremely conservative design in anticipation of possible future requirements for still greater power and torque."

WHAT THE CAR IS LIKE TO DRIVE

Driving position: As comfortable as any car tested this year. Except for pulled-on emergency brake being in way when getting in or out, plenty of room to move around. Wheel position good, slightly higher than in Clipper due to lower seat.

Controls handy, well marked, easy to use with no need to stretch.

Vision: Top-notch forward vision over low hood; high fenderline. No windshield distortion thru normal line-of-sight area. If possible, dictate to dealer proper positioning of outside mirror if you're buying a Packard (or any other car). We've seen many different installations of Packard's glamorous side mirrors, some very good, some extra-bad.

Ease of handling: As flexible as smaller (by 3½ inches overall) Clipper in town, on curving roads, on the open highway. Good all-around vision helps here, as does Packard's linkage-type power steering (just over 3¾ turns lock to lock), which maintains nearly constant feel, or resistance.

Acceleration: Good in all ranges, won't give you that "sitting duck" feeling out in the passing lane. Ultramatic's 2-position DRIVE setup offers smoothness or acceleration—but rarely both at low speeds. In

lower of 2 ranges (right-hand dot on quadrant), you'll gain 1½ seconds in standing ¼-mile, 1½-mph boost in speed crossing the line. To 60, you'll have 3-second advantage. Having kickdown to low gear in this range moves you from 10 to 30 mph 1½ seconds faster than in smoother DRIVE range, which has kickdown only to torque converter from direct-drive hookup.

Braking: Preliminary tests showed braking ability equal to lighter (by 440 pounds) Clipper Custom. Packard's brakes reluctant to lock at instant pedal was hit—a nice feature when, as in this case, car comes to rapid, non-skid halt. Packard has larger drums, larger lining segments than Clipper series.

Roadability: Surprisingly good; often felt like true stiffly sprung car, never slipshod during MT's tests. More rear-wheel hop over washboard roads than Clipper Custom. Fine high-speed car. Stable, sensitive to touch on steering wheel at cruising speeds, no wind wander.

Ride: Don't let that mass of bars and links on the chassis displayed at your dealer's showroom be misconstrued as rugged in ride as well as construction. It's solid all right, but those "trapeze bars" can float you thru severest of dips with greatest of ease.

Initial lunge common to all cars coming out of dip or over bump is followed by eerie sensation of not coming back to earth with jarring rebound. Packard "hangs up" (actually, rear wheels brace themselves downward after front has lifted), comes down softly, with no oscillation. Smooth, strange, refreshing reaction unique with Packard, T-bar Clippers.

WHAT THE CAR IS LIKE TO LIVE WITH

Riding in the front seat: Roomy, comfortable seats, plenty of legroom. Dashboard deep, wide, handsome, but can be

uncomfortably near knees with seat in forward position.

Riding in the rear seat: Nothing drab here; luxurious hardtop test car quite spacious for 2-door model, denoted quality, livability. (Figures in General Specification table are for 4-door sedan.) In back, more than in front, you realize advantage of level ride, for effect is greater when you're not looking for bumps.

ECONOMY AND EASE OF MAINTENANCE

Fuel economy: Ultramatic can serve you well if you choose correct axle option for your needs. Choices are 3.07, 3.23, 3.54. Test car's 3.23 fared well, considering powerhouse up front. Higher 3.07 (lower-ratio) gear should do even better, won't cause lugging feeling with largest-displacement '55 V8 backing it up.

Is the car well put together? We can answer that question with some authority. Test car's noticeable file marks around headlight, tail light "eyelids," and around door posts led to survey of many other Packards at showrooms, parked along street. Others were well finished, had better paint jobs, indicating ours was early production model, or just poorly detailed. Interiors of all cars checked looked good.

How did it hold up? Everything worked right, felt, looked as if it would hold together for a long time to come. Good shape at end of trying test.

Servicing: Falls about mid-range in accessibility ratings of '55 V8s. Service station attendants said only, "Which one's crankcase and which one's transmission dipstick?" (Packard's 2 dipsticks fairly close together.) Engine's design features, including engineered compensation for carbon buildup problems and longer-range problems like piston slap, cylinder scoring, indicate long engine life.

GENERAL SPECIFICATIONS

ENGINE: Ohv V8. Bore 4.0 in. Stroke 3.5 in. Stroke/bore ratio 0.875. Compression ratio 8.5:1. Displacement 352 cu. in. Advertised bhp 260 @ 4600 rpm. Bhp per cu. in. 0.74. Piston travel @ max. bhp 2683 ft. per min. Max. bmep 152.1 psi. Max. torque 355 lbs.-ft. @ 2400-2800 rpm.

DRIVE SYSTEM: AUTOMATIC transmission is Ultramatic, 4-element torque converter with planetary gears and direct drive above 15-55 mph, depending on throttle position. RATIOS: Drive, torque converter only and 1.00 (direct drive) or, at separate quadrant position, 1.82 x converter ratio, torque converter only and 1.00. Low, 1.82 x converter ratio. Reverse 1.63 x converter ratio. Maximum, converter ratio at stall 2.9. Other transmissions not available.

REAR-AXLE RATIOS: Ultramatic, 3.54 standard, 3.07, 3.28 optional.

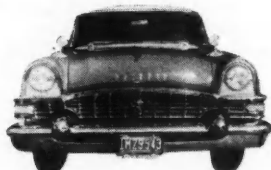
DIMENSIONS: Wheelbase 127 in. Tread 60 in. front, 60.9 in. rear. Wheelbase/tread ratio 2.10:1. Overall width 78 in. Overall length 218.5 in. Overall height 62.3 in. Turning diameter 45 ft. (43 with power steering). Turns lock to lock 4¾ (3¾ with power steering). Test car weight 4660 lbs. Test car weight/bhp ratio 17.9:1. Weight distribution 54% front, 46% rear. Tire size 8.00 x 15.

PRICES: Patrician 4-door sedan \$4040, 400 hardtop \$4080, Caribbean convertible \$5932.

ACCESSORIES: Radios \$109, \$132, heater \$128, power steering \$115, power brakes \$40, power seat \$70, power windows \$108, air conditioning \$652.



Side-mounted courtesy light proves really worthwhile, stays on (with less glare) as "running light" with headlights on



REAR-WHEEL HORSEPOWER

(Determined on Palmieri Engineering's Clayton chassis dynamometer. All tests are made under full load, which is similar to climbing a hill at full throttle. Observed hp figures not corrected to standard atmospheric conditions.)
103 road hp @ 2000 rpm
147 road hp @ 2500 rpm
Max. 158 road hp @ 3200 rpm

TOP SPEED

(In miles per hour over surveyed ¼-mile.)
Fastest 1-way run 111.0
Slowest 1-way run 109.2
Average of 4 runs 110.1

TEST CAR AT A GLANCE

'55 Packard 400 with Ultramatic

ACCELERATION

(In seconds; checked with 5th wheel and electric speedometer.)

Standing start ¼-mile (76.3 mph)	18.6
0-30 mph	3.9
0-60 mph	11.4
10-30 mph	3.0
30-50 mph	4.5
50-80 mph	13.3

SPEEDOMETER ERROR

(Checked with 5th wheel and electric speedometer.)

Car speedometer read 33 @ true 30 mph	
50 @ true 45 mph	
68 @ true 60 mph	
82 @ true 75 mph	
120 @ top speed	

FUEL CONSUMPTION

(In miles per gallon; checked with fuel flowmeter, 5th wheel, and electric speedometer. Mobilgas Special used.)

Steady 30 mph	18.4
Steady 45 mph	16.3
Steady 60 mph	14.6
Steady 75 mph	12.5
Stop-and-go driving	
over measured course	11.3
Tank average for 688 miles	10.5

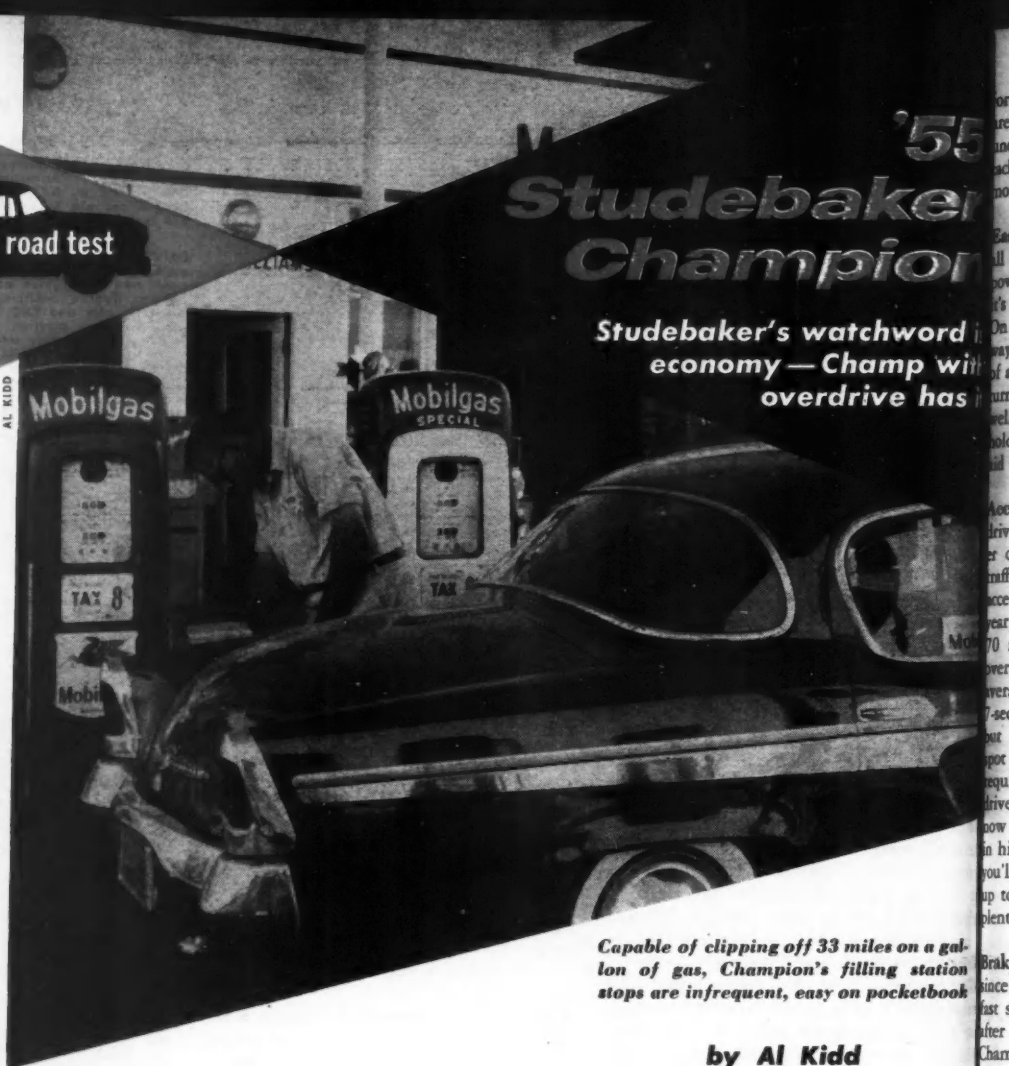
STOPPING DISTANCE

(To the nearest foot; checked with electrically actuated detonator.)

30 mph	44
45 mph	89
60 mph	151



AL KIDD



'55 Studebaker Champion

Studebaker's watchword is
economy—Champ will
overdrive has

Capable of clipping off 33 miles on a gallon of gas, Champion's filling station stops are infrequent, easy on pocketbook

by Al Kidd

PERENNIAL WINNER of the Mobilgas Economy Run, Studebaker's greatest claim to fame is the exceptional mileage it can squeeze from a gallon of gasoline. We found out what the new President could do (Dec. '54 MT), and by now everyone knows that a Commander V8 using Automatic Drive (with its economical direct-drive lockup) won the Mobilgas Economy Run. Altho the Champion remains basically the same car that MT tested in '53, 2 varied factors called for a re-evaluation. First, Studebaker has modified the Champ's 6-cylinder engine to produce more horsepower than last year's 85. Secondly, the '53 test car was super-tuned for the Economy Run and therefore chalked up exceptional gas consumption figures. So we set out with a '55 Champion mainly to discover what effect 16 added horses would have on the fuel economy of a car with normal factory tuning. At the same time we kept our eyes open for the little things that MT readers (old and new) would like to know. Here's what we found.

Test car: 4-door Champion Regal with overdrive, radio, heater, hill holder.

Engine: Newly modified Studebaker Victory 6 with more displacement (185.6 cubic inches), resulting in a horsepower jump from 85 in '54 to a new-found 101. The larger displacement comes from a longer (4.38-inch) stroke (4.0 in '54). Compression ratio is up from 7.0 to 7.5.

Other options: Automatic Drive, power steering, brakes, and windows available on Champion; no air conditioning. For the acceleration-minded person, most important option could be jumping to Commander V8 (with a price almost identical to most expensive Champion).

WHAT THE CAR IS LIKE TO DRIVE

Exit and entry: As in past years, sharp rearward slant at top of front doors is impractical; one just doesn't expect added sweep when opening door; it can easily hit you in the face or chest. No trouble from steering column or posts of modestly

wrapped windshield on the test sedan, despite its lowness.

Driving position: Low, and steering wheel quite high. Pedals on conventional-transmission Stude still way over to left and small—rather awkward for braking until you get used to it. Shift lever is too short, making it necessary to reach around wheel.

Vision: Excellent vision thru deep windshield (with 187 square inches more area than '54s) and over sharply sloping hood. Very good see-ability thru large rear window (altho rear fenders are not visible from driver's seat). Mirror vibrates at high speeds, causing blur; outboard mirror placed close to driver helps to make up for it. Grouping and marking of instruments is fine but glare from surrounding chrome makes them difficult to read on a bright day; no trouble at night.

Operation of accessories: Window cranks work easily (but require many turns) and, along with doorhandles, have uncon-

portably sharp contours. Control knobs are well placed and recessed under top of uncluttered dash but were flimsily attached on test car and came off with moderate pull.

Ease of handling: Very easy to steer from all but complete standstill. Even without power steering (you shouldn't need it) it's no fight to get into small parking place. On notoriously twisting and narrow driveway, the Champion backed down easiest of any car tested, thanks to good visibility, turning radius, small size. In parking, as well as on grades, clutch-controlled hill holder (optional on Champions) is great aid and well worthwhile.

Acceleration: Perfectly adequate for city driving, Champion's relatively low power could be serious stumbling block on traffic-studded highways. After flooring accelerator at start of 50-80 runs this year, we dropped into overdrive at about 70 mph (to get more torque from the over-revved engine) and were able to average 36.6 seconds. This represents a 7-second improvement over '54 average but it's an awkward method in a tight spot and at least 10 seconds more will be required if you don't use shift to overdrive. Average time for 30-50 range is now 8.8 seconds (10.0 in '54). Even so, in high-speed passing with the Champion you'll want to use particular prudence, get up to a good speed before passing, allow plenty of leeway for oncomers.

Braking: We didn't test brakes this year since all factors remain same as in '54's fast stopper. Quick stops on highway and after acceleration runs left no doubt that Champion stops just as fast and straight as it always has ('54 figures given in accompanying table).

Roadability: Studebaker has been, and still is, a fine road car. Most outstanding feature is very accurate steering that puts car just where you point it with no

front-end hesitation. At the Champion's normally conservative speeds it's pretty tough to make back end break loose, but if it does, some trouble could result from inadequate power to pull you out of bad slide. If surface is rough, rear will hop decidedly during rapid cornering. Your salvation, again, is excellent feel thru steering which should keep you too well informed to get into trouble.

Ride: While comfortable enough for all but the finicky, ride has pretty much yielded to roadability. Body shakes noticeably on bumps and tar strips, and highly crowned roads can also cause discomfort. In general you *feel* road, but it's a firm feeling more than harsh one. Very little body lean, so in sharp cornering passengers don't tend to slide around.

ECONOMY AND EASE OF MAINTENANCE

Fuel economy: Even with its added horsepower, Champion easily upholds Studebaker's economy tradition. Naturally it doesn't match figures recorded by '53 Economy Run car but, all considered, difference is slight: Champ still gets an amazing 33.1 miles per gallon at a steady 30 mph and 21.7 at a comfortable 60-mph cruising speed. In traffic, where it's particularly at home (and where big V8s usually suffer), the 6 (using overdrive as much as possible) gets a calorie-counting 19.4 mpg. Even in conventional drive you can get 25.9 mpg at a steady 30 and 21.5 at 45 mph, this with Mobilgas Regular used thruout test. As in past, Champion owner won't be his filling station operator's best account, but driver's monthly gas budget will shout for joy.

Is the car well put together? Workmanship thruout Studebaker line has steadily improved since new models appeared in '53. All fits on test car looked good, outside and in, with no sloppiness, file marks, or poor finish noted. It appears, tho, that some materials used are less than

GENERAL SPECIFICATIONS

ENGINE: L-head 6. Bore 3.0 in. Stroke 4.38 in. Stroke/bore ratio 1.456:1. Compression ratio 7.5:1. Displacement 185.6 cu. in. Advertised bhp 101 @ 4000 rpm. Bhp per cu. in. .544. Piston travel @ max. bhp 2917 ft. per min. Max. bhp 123.4 psi. Max. torque 152 lbs.-ft. @ 1800 rpm.

DRIVE SYSTEM: STANDARD transmission is 3-speed synchromesh using helical gears. RATIOS: 1st 2.60, 2nd 1.63, 3rd 1.0, reverse 3.53. AUTOMATIC transmission is 3-element torque converter with planetary gears. Maximum converter ratio at stall 2.15. RATIOS: Drive 2.31 x converter ratio, 1.43 x converter ratio, 1.0 (direct drive). Low 2.31 x converter ratio; Reverse 2.0 x converter ratio. OVERDRIVE transmission is standard shift with planetary gear-set. RATIO: 0.7.

REAR-AXLE RATIOS: Standard 4.10, Automatic 3.54, Overdrive 4.56.

DIMENSIONS: Wheelbase 116.5 in. Tread 56.7 front, 55.7 rear. Wheelbase/tread ratio 2.08:1. Overall width 69.5 in. Overall length 202.3 in. Overall height (empty) 61.8 in. Turning diameter 41 ft. Turns lock to lock 4.3. Test car weight 3080 lbs. Test car weight/bhp ratio 30.5:1. Weight distribution 55% front, 45% rear. Tires 6.40 x 15.

PRICES: (Including suggested retail price at main factory, federal tax, and delivery and handling charges, but not freight.) CUSTOM 2-door sedan \$1741, 4-door sedan \$1783, DELUXE 2-door sedan \$1841, 4-door sedan \$1885, club coupe \$1875, 2-door station wagon \$2141. REGAL 4-door sedan \$1993, club coupe \$1975, hardtop \$2129, 2-door station wagons \$2141 and \$2312.

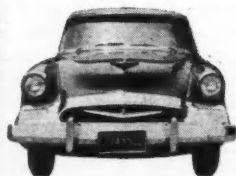
ACCESSORIES: Automatic Drive \$200, overdrive \$105, radios \$74 and \$97, heater \$66, power steering \$108, power brakes \$35.

highest quality. Car held up well during test—no squeaks, running-gear noises or malfunctions.

Servicing: As you'd expect, Stude's smallish 6 is easier to work on than any V8. Plugs and all other major components are right there waiting to be looked after. Unusual, tho, is poorly placed oil dipstick which is difficult to maneuver from either side of car. You'll have a hard time finding a cheaper car to operate and maintain.

SUMMING UP

Fuel economy is the big selling point, and it can only be called superb. Altho it still has some inconveniences, the Champion is an excellent in-town car and has a good feel on the open road as long as you don't care about passing everything in sight. If you're not a traffic-light dragster and if you like economy (who doesn't?), your Champion could easily be this Studebaker.



TEST CAR AT A GLANCE

'55 Studebaker Champion with Overdrive

REAR-WHEEL HORSEPOWER

Determined on Clayton chassis dynamometer. All tests are made under full load, which is similar to climbing a hill at full throttle. Observed hp figures not corrected to standard atmospheric conditions.)

26 road hp @ 1200 rpm and 21 mph
40 road hp @ 2000 rpm and 35 mph
46 road hp @ 2500 rpm and 44 mph
Max. 51 road hp @ 3050 rpm and 53 mph

TOP SPEED

In miles per hour over surveyed 1/4-mile.)
Fastest 1-way run 85.8
Slowest 1-way run 85.0
Average of 4 runs 85.4

ACCELERATION

(In seconds, checked with 5th wheel and electric speedometer.)

Standing start 1/4-mile (62.5 mph)	22.0
0-30 mph	5.7
0-50 mph	20.6
10-30 mph	4.9
30-50 mph	8.8
50-80 mph	36.6

SPEEDOMETER ERROR

(Checked with 5th wheel and electric speedometer.)

Car speedometer read 34 @ true 30 mph
52 @ true 45 mph
69 @ true 60 mph
84 @ true 75 mph
97 @ top speed

FUEL CONSUMPTION

(In miles per gallon; checked with fuel flowmeter, 5th wheel, and electric speedometer. Mobilgas Regular used.)

	o.d.	conv.
Steady 30 mph	33.1	25.9
Steady 45 mph	25.6	21.8
Steady 60 mph	21.7	
Steady 75 mph	17.7	

Stop-and-go driving over measured course	19.4
Tank average for 460 miles	18.1

STOPPING DISTANCE

(To the nearest foot; checked with electrically actuated detonator.)

30 mph	38
45 mph	87
60 mph	150

NEW MOOD IN MOBILE MUSIC

No longer content with squawky low-fidelity radios, ingenious motorists are exploring these trends in modern listening

by Jim Potter

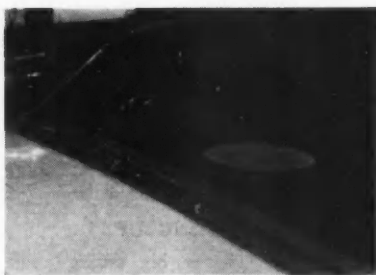
NOT TOO LONG AGO, terms like hi-fi, "canned" music, AM-FM, and "ham" operators were strictly for select music lovers, electronic wizards, and perfectionists in the radio equipment and broadcasting industries.

Then they became more commonplace during our progressive, postwar period, and some of the strangeness wore off. Still, it remained an oddity to see a short-wave handset hanging from the dashboard of a privately owned automobile, and only lavish show

cars had tape recorders flanked by an array of dials and switches.

But now it's open season on mobile listening enjoyment, and everyone can get in on the fun—starting with getting better reception out of your buzzing, non-pushbutton radio or that signal-seeking job that rasps like a gramophone, and working your way up to a custom radio-tape-recorder installation or a transmitter-receiver designed for cross-country chatter. Here are some of the possibilities that may make sense for your car.

When static goes, you may like your old radio



An inexpensive step to more listening enjoyment: do-it-yourself rear-seat speaker

TRACKING DOWN THE CAUSE of radio static can be as exasperating as trying to get rid of a chronic engine misfire using only the hit-and-miss method of analysis. Aside from an ailment within the set itself, a crackling speaker can have as its trouble source ignition system and engine noise disturbances, tire and wheel static, and inherent noises within the body of the car. External noises—man-made static—such as streetcars, power lines, and neon signs are warm shelters for the gremlins

that "bug" car radio reception. But before you shut off the radio because you can only get station **STATIC**, read over these tips for better listening.

Ignition and engine noise static can be curbed by installing resistor-type wiring from coil to distributor to plugs; many new cars are using this built-in noise suppression, and old ones benefit too.

Replacing faulty ignition system suppressors presently on your car can help, and shielding sparkplugs and wiring can reduce noise. A bad sparkplug can make itself heard thru your radio; if necessary, try a plug with a built-in resistor.

Proper grounding of the radio itself as well as the antenna (which may also be moved to the rear of the car, away from ignition-engine disturbances) may be the solution to your problems. Some installations benefit from ground straps trailing from the chassis.

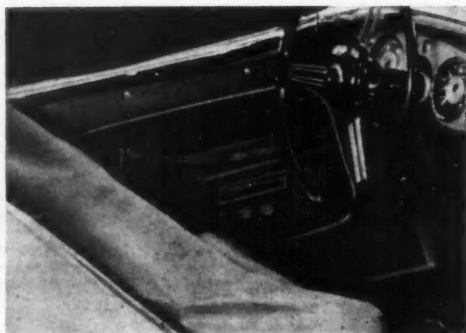
Rhythmic static, increasing with car speed, usually indicates tire and wheel static—an electrical buildup in tires. Compounds like Static Neutralizer, Static-Chaser and Wheel Static Compound, injected

into each tire, can usually alleviate the source of bothersome static. High-squeal noise caused by poor wheel bearing grounds (which result in an arc-over condition between wheel and axle) can be lessened by having your radio shop install wheel static collectors in the front wheel.

External radio interference (technically termed "extreme radiation interference") poses a bigger problem. But it's a problem which seemingly has been solved by the "No-tenna" system devised by Davis Radio, of Los Angeles.

The "No-tenna" utilizes the body of the car for an aerial, eliminating the need for the standard antenna. Altho it's not yet available, we mention it here because of an impressive demonstration witnessed recently: switching back and forth from standard aerial-type signal to the "No-tenna," we experienced nearly static-free reception, regardless of nearby disturbances when the new device was cut into the circuit. We feel that the device may defeat external noise and result in better radio reception in your car of the near future, as well as cleaning up the exterior.

You shall
have music
wherever
you go

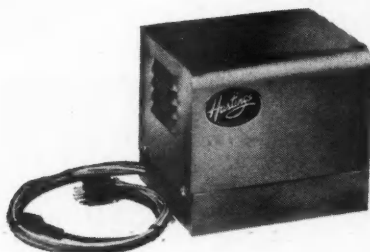


ANOTHER SUGGESTION which may appeal to you is one that we heard from a Motorola representative. You can use a battery-powered A-DC portable radio in your car with good result if you modify the radio so a permanent-type antenna could be plugged into it. Thus, you'd have a beach or picnic radio as well as a car radio (and you wouldn't have to keep turning the portable around or hang it out the window as you do most portable sets with self-contained aeriels). Fine for sports cars!

Trade your commercials for true tone



For custom-quality output, try an 8-inch rear speaker like this \$29.50 Altec model



Hi-fi sound can be had with Hastings amplifier. Range is 20 to 20,000 cycles



Compact FM tuner for high-fidelity radio gives static-free reception for \$99.50

IF YOU HAVE an FM (frequency modulation) radio in your home, you're already familiar with the joys of listening to good, static-free music rarely interrupted by announcements and commercials. By adding an FM tuner to your present car radio setup you can have this kind of pleasure while driving. Two commercial units that we know of—the Hastings and the Gonset—can be installed below the dashboard, operating in conjunction with your car radio.

For those who have the desire for top quality tone, true high-fidelity sound (limited, of course, by the physical acoustical problems inherent in a car's interior design) may be had with the addition of an

amplifier, and one or more speakers of your choice. A Hastings unit—8 watts, 1½ decibels from 20 to 20,000 cycles—costs \$63.50, and like the FM tuner, is used with your AM radio.

Using this amplifier and the FM tuner, you'll need a separate FM antenna. One made by Hastings costs \$5.50; it's designed to provide balanced electrostatic and electromagnetic pickup. Unlike your standard radio aerial, this type consists of a circuit imbedded in a special thin, transparent strip of plastic, and it's mounted on the edge of the windshield, rear window, or on a side window.

The heights of high-quality radio reception are limited only by ambitions and/or



FM car radio uses this antenna. Encased in plastic, unit mounts on car window

bankroll. If you've ever ventured into projects as simple as building a crystal-type radio receiver, you might look into inexpensive, do-it-yourself FM tuner-amplifier kits such as those produced by the Heath Co., Benton Harbor, Mich.

Why not pick the music you want?

IF FM RADIO doesn't interest you, you can still be free from the incessant commercials and product-plugging disc jockeys by installing a tape recorder. A recorder can be a portable setup, coupled thru a converter and plugged into your car's cigarette lighter socket, or it can be permanently installed and wired right into the battery source. The beauty of a recorder is, of course, in being able to select

music of your own choosing from your stock of pre-recorded tapes.

It isn't necessary to strap down a portable recorder; we've checked them out and found that they have the ability to take dips and bumps in the road without missing a beat.

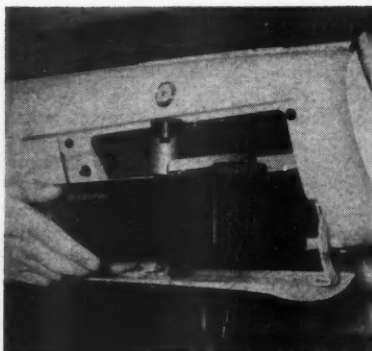
Some music lovers have mounted the compact RCA 45-rpm record player in shock-mounted armrests, in glove com-

partments, or in special drawers or shelves beneath the dashboard. The short tone arm on this machine with its good compliance, tracks the stylus well—unless you hit a rim-denting bump.

The larger record changers are more critical to car movement and haven't been too successful in mobile installations. It's the tape or wire recorder's resistance to shock that makes it the popular choice.



Portable tape recorder is useful for business, pleasure, can take rough handling



RCA's minute 45-rpm record changer may fit into your glove compartment



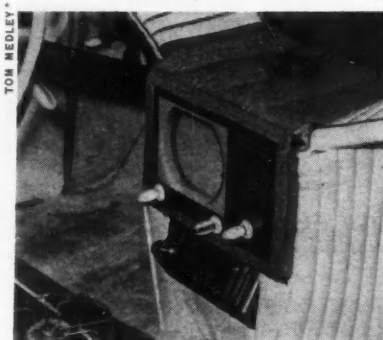
Wire or tape recorders aren't limited to customs, may be seen in Detroit cars

NEW MOOD IN MOBILE MUSIC continued

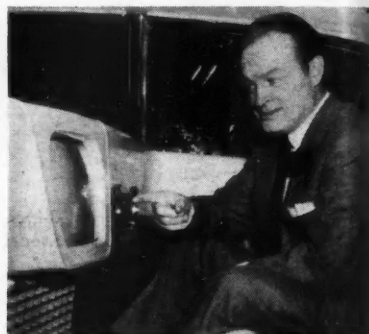
If you want to look, too

ALTHO entirely feasible in both theory and application, mobile television reception is limited now largely because few people have exploited its possibilities. Even those on the outside looking in recognize ignition interference as a major problem (TV is more susceptible to this than is radio); the set will need an all-directional antenna installation—perhaps one with a homing device to keep the picture from disappearing every time you turn a corner. The intricacies of television transmitting and receiving call for a converter or generator to produce exactly 60 cycles to keep your picture "locked in" with the station's signal.

Except for special show cars like the Golden Sahara shown here, all cars carrying operating TV sets will have to be governed severely, with the set being restricted to rear-seat installation as a safety measure (as in the Cadillac installation at right).



Built into front compartment of show car for looks only, this is safety hazard



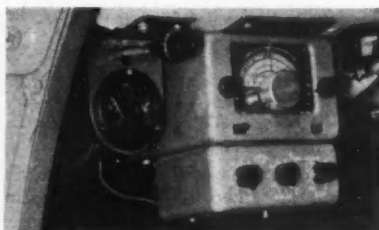
Working model (on closed circuit) is shown with Bob Hope in Cadillac sedan

Our sources tell us that current experimentation will produce something "practical, but costly" in the near future. But it'll have to be a set with an unbreakable

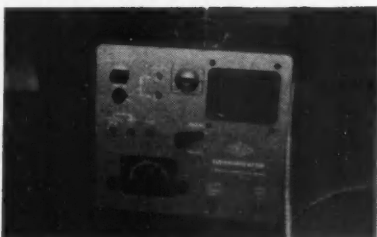
screen, placed where it won't be a hazard in a collision (and where its glow wouldn't cause distracting night-time reflections) before we can buy it.

If you want to give as well as receive

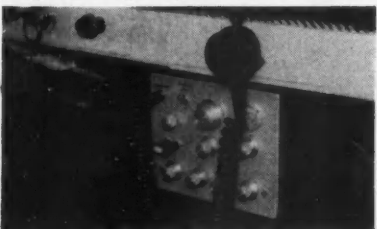
by Norman Sklarewitz



Gonset converter extends range of car radio to pick up short-wave broadcasts



The 2-meter set works without converter, plugs into cigar lighter socket, is \$229



Composite "transceiver" (transmitter and receiver in unit) is neat, home job

THERE WAS A TIME when a long antenna swaying from the rear bumper of a car meant only one thing—a police car. Today, that waving aerial probably belongs to an amateur radio fan who operates his station right from his car.

Since World War II, thousands of "ham" radio operators (125,000 in the U.S. alone) have combined their radio hobby with their enthusiasm for motoring. Development of small, highly efficient, and relatively inexpensive mobile radio equipment is partly responsible for the boom in the fad; then, too, the Federal Communications Commission (FCC) recently okayed a "novice" class rating that permits a fan to get his or her license (or "ticket") with a minimum of technical background.

There's more to having a mobile rig than just chatting with buddies anywhere from the next county to Pakistan. Ham operators are organized into the Amateur Radio Emergency Corps (AREC) and work with Civil Defense, Red Cross, and police in providing communications for any of a dozen public services.

When hurricanes hit the East Coast last year, "mobileers" were often the only communications link with the outside world. And less spectacular, but no less important, are the times when radio-equipped cars have summoned aid to scenes of highway accidents.

A car's regular 6- or 12-volt battery is an adequate basis for all but the extremely powerful ham rigs. Car generators usually can be adjusted to handle the voltage and

current load required to operate an amateur setup. Dynamotors or vibrator packs provide the fixed voltage and current for the transmitter.

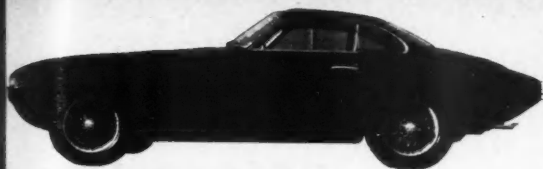
Mobile transmitters are characterized by their small size, rugged construction and remote control features. Many units are small enough to be bolted in under the dashboard, or set in against the firewall.

The receiver for ham communications can be either a special short-wave set, or a short-wave converter which works in conjunction with the car's standard broadcast receiver. This converter extends the tuning range of the regular radio up to the short-wave bands.

Antennas for mobile stations are generally mounted from the rear bumper to accommodate the 8- to 14-foot vertical whip. The 2-meter band amateur radio unit usually carries a small roof-top, telephone-type aerial. That large round gadget you often see at the base, center, or top of the long antenna is a loading coil, used to extend the wave length of the antenna.

A kit for a mobile transmitter will cost about \$100, while a complete, commercially built set starts at around \$150. Short-wave converters start from \$50 and full receivers run from \$135 and up. One manufacturer (Gonset) now offers a complete 2-meter station, with transmitter and receiver all in a portable case, for \$229.50.

Full details on taking out an amateur license can be had from the FCC, or from the American Radio Relay League at West Hartford, Conn. (Continued on page 72)



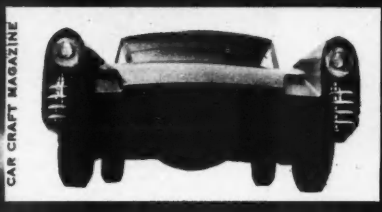
ITALY HAS LOOKED AT THE U.S. . . .



CUSTOMIZERS WORK
IN DETROIT . . .



DETROIT HAS LOOKED AT THE STARS . . .



AND ACROSS THE
CONTINENT

MOTOR TREND LOOKS AT DETROIT STYLING

BY PETE MOLSON

THE MODEL YEAR now drawing to an unimaginably successful close has seen spectacular changes in the U.S. automotive market. Never did a year start so auspiciously: Freed of World War II and Korean War shortages, both real and feared, you and your neighbors had demanded that Detroit give you something really new. You wanted new power, new gadgets of the sort that make a new car altogether different from its faithful-but-dull predecessor. But most of all, auto makers and their advertising agencies had learned, an unprecedented number of buyers insisted on exciting looks—new silhouettes, new fabrics inside, new and exciting colors. No, men, don't laugh; statistics show that *we* are the ones who demand the electric blues, the pinks, the lime greens; we, it seems, want the super-deluxe interiors.

What has happened to bring about this state of affairs? Partly, it's the influence of the rising awareness of style in other fields of design. It's only a few years since the printed page was a rigid, always symmetrical thing, dependent on its content alone

for any possibility of raising a reader's interest. It's not so long since only an effeminate dandy would consider wearing a wristwatch. (Perhaps we can even hear our grandfathers saying, "Any man who would wear a wristwatch would wear a pink shirt—or drive a pink car!")

Well, you know who drives the pink cars now: darn near everybody. And are you one of the diehards who insist that pink is feminine? Well then, there's something distinctly feminine about most automobiles, so why shouldn't they wear any color they like?

Leaving other influences alone for a moment, just what have other eras, other modes contributed to the looks of your new car? Pictured on this page are some of the types of cars that have made themselves felt: the American (sometimes called "California") customs; those uniquely Detroit-inspired creations, the dream cars; and the sometimes-quiet, sometimes-raucous, but never dull Italian models. To find just *how* these hereditary and environmental factors have affected your car's looks, turn the page.



HOW DETROIT STYLING IS INFLUENCED

BY DON MACDONALD

DETROIT DREAM CARS

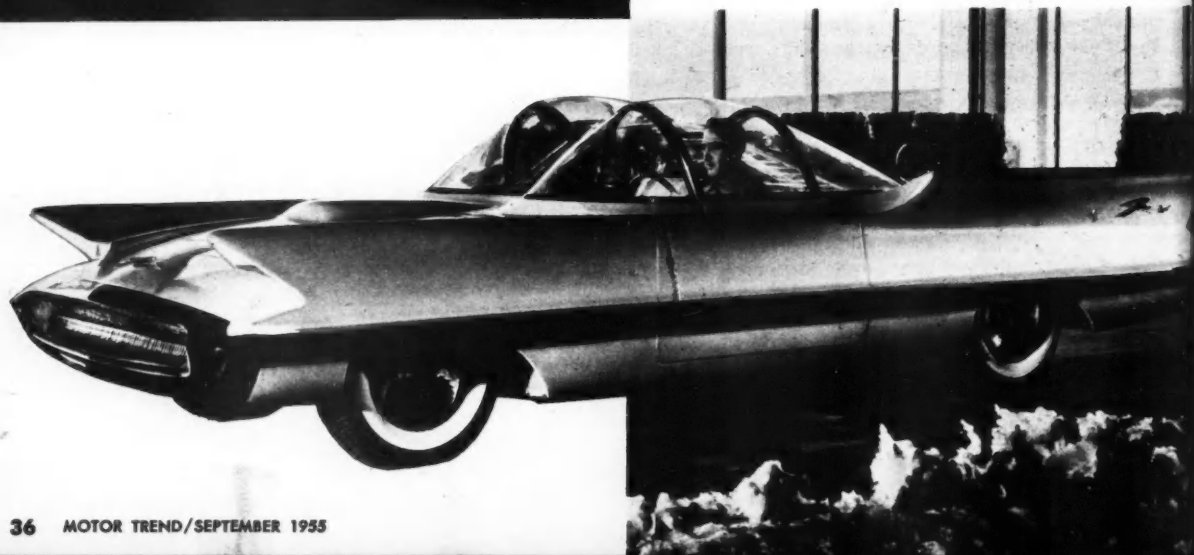
WE HAVE BEEN AROUND Detroit for some time, and have yet to be convinced that futuristic dreams such as Ford's Atmos, or GM's LeSabre, contribute as a whole to styling.

GM obviously wised up, because this year's Motorama showed cars you can visualize in your garage.

As long as they are not too futuristic, dream cars have a very profound and directly traceable influence on Detroit production models. They are the clue to what is planned for the next tooling change. If public reaction is favorable, they are the next tooling change.

Altho Ford is now alone in financing the creation of vehicles suitable for Buck Rogers, every company supports an "advanced styling" studio, where men are paid to dream. These designs sometimes contribute a detail but rarely a theme.

It should always be remembered that show cars a la GM's current ones are created *after* the equivalent production design is in the works. The real dream car is just that—a dream—and its sole purpose is publicity. Ideas can be gotten just as well from much cheaper (and seldom publicized) sketches.



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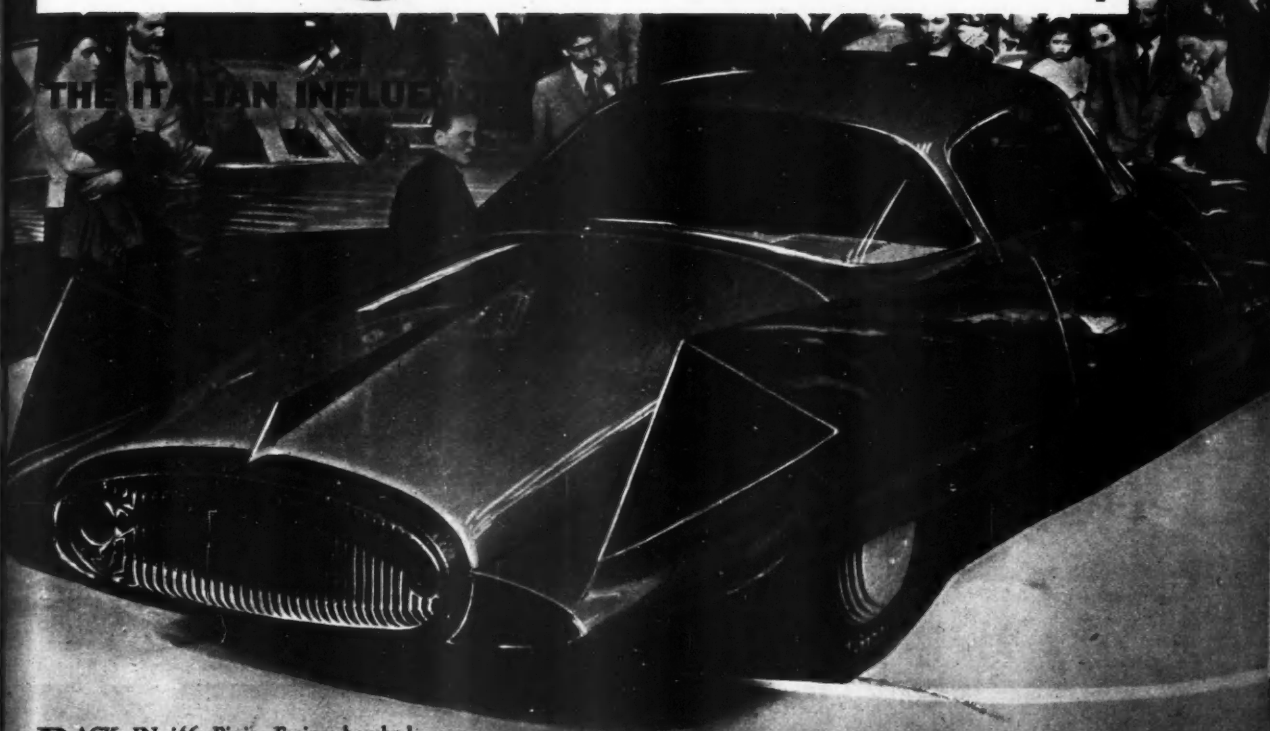
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BILL SOUTHWORTH

THE ITALIAN INFLUENCE



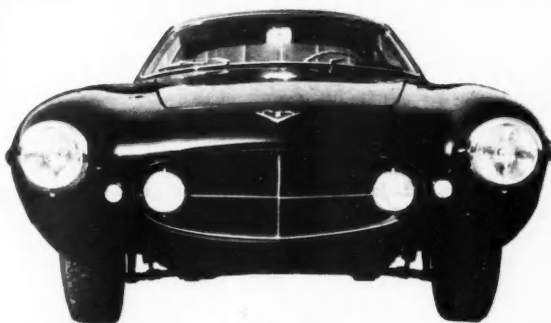
BACK IN '46 Pinin Farina bombed Detroit with a Cistalia. Things have never been the same since.

This little gem was used by stylists to show management that all the chrome in Michigan couldn't salvage a basically bad body. Other Italians elaborated on the basic theme, proving only that imported design was premised on a 2-passenger car. Attempts to blow it up, American-size, were disastrous.

Detroiters, Virgil Exner in particular, have shown that *they* can design a car more Italian in flavor than anything that ever came out of Italy. Currently, however, Italians have a corner on the specialty market. Ghia, for example, can produce a coupe for Lou Fageol or a gas turbine mock-up (probably for Chrysler) without inhibition or restriction.

The bumper on Fageol's car (right) was added here, spoiling the design. Nor can Ghia be criticized for the completely impractical (traffic-wise) styling of the turbine car. He just doesn't care about details like these, or, for that matter, about mass production potential.

For these reasons, Italians no longer have much influence on Detroit.



LEE NEHAMKIN

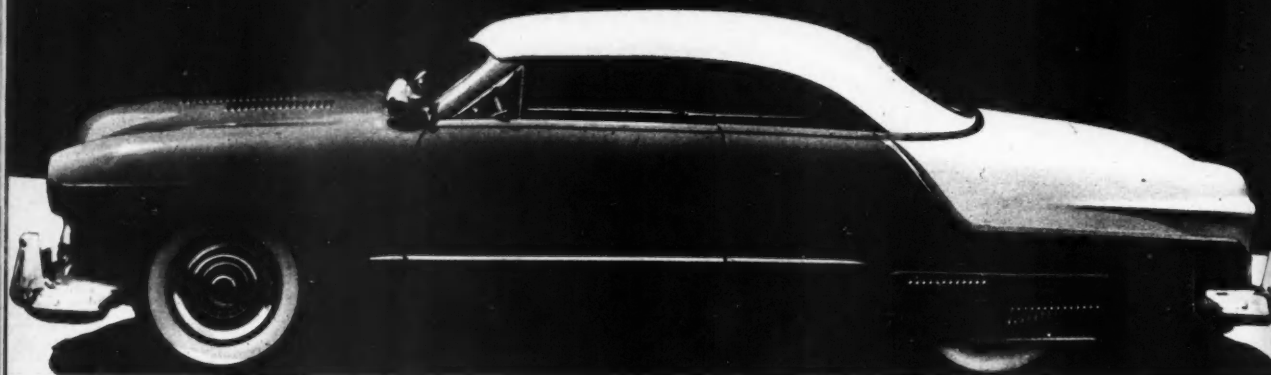


HOW DETROIT STYLING IS INFLUENCED

continued

CALIFORNIA CUSTOMS

STYLING HAS GAINED MUCH from backyard customizers, even though gain is intangible and often misrepresented. Both Detroit and custom trends are cyclical; one is invariably the opposite of the other. In the early '30s, Ford owned added chrome ornamentation to Model A and V8s; thruout the '40s they removed



CAR CRAFT MAGAZINE

FLAJOLE'S REBELLION

BILL FLAJOLE IS A CONSULTANT on advanced styling for American Motors. As such, he has made countless sketches and clay models, but only in the case of the NXI has he seen even a close approximation of his ideas come off the assembly line.

His Jaguar-based "Forerunner" is really a rebellion. Designed around his own slightly stocky, 5-foot-7-inch physique, it is his completely personal dream car. It is of great interest, because it is one of the few custom cars in existence today that has been styled and built by a recognized professional who (temporarily at least)

was not being influenced by an all-powerful management.

The beautifully finished Fiberglas body contains many innovations that might be practical for production, assuming a market for a 2-passenger car. The power-operated Plexiglas roof of course determined the contour of the "fast back." All the mechanical beauty of the Jaguar chassis has been retained, yet the design has an unmistakable Nash flavor. Details like the "nerfing bars" straight from the dirt track jar one at first, but then, Detroit could well note that good design is not necessarily a boring and repetitious melody.



PHOTOS BY BOB MACKENZIE

MUCH from
en the n
disrepresent
trends
opposite
Ford owner
Model
removed

Both schools stemmed from basic deficiencies in the Detroit product. Now showrooms are filled with relatively esthetic vehicles. Early attempts to transform '46-'48 Fords were of considerable help to stylists in their fight to convince management that better-looking production designs were sorely needed.

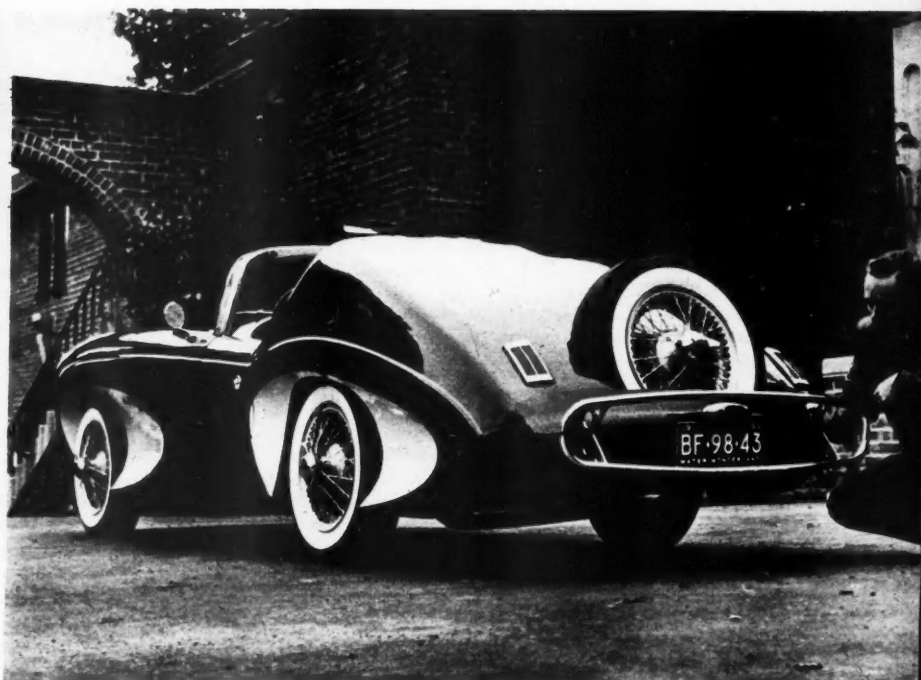
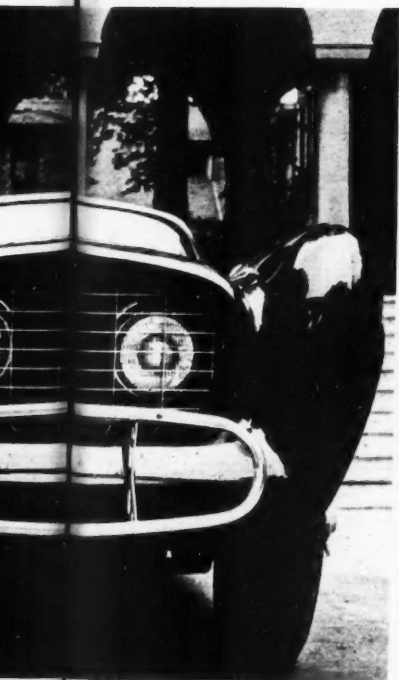
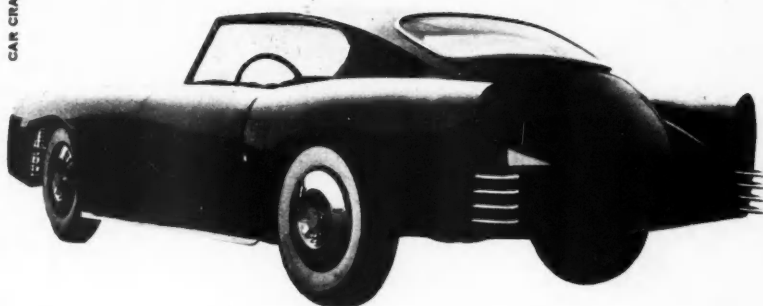
Detroit stylists like the moderately sectioned approach, as exemplified by Dr. Gordon Gilbert's '50 Ford Tudor, because it maintains fair proportion. They feel that chopping shouldn't be attempted without thinning the roof line, a job beyond average ability and pocketbook. Jay Johnston's '51 hardtop partially overcomes this objection with clever 2-toning, but the middle is still too bulky.

Jay Everett's "pure custom" (built from the ground up) is one of the recent best, but Detroit stylists have the feeling it was designed for ease of construction instead of being styled. Curved surfaces are too "wrapped," joints too angular, and the simple grille and tail end look, somehow, vaguely unfinished.

So say the professionals, and if anyone should know, they should. But you're the buyers. What do you think?



CAR CRAFT MAGAZINE





THE EDITORS LOOK AT CAR STYLING

BY WALT WORON

SHOULD FORM FOLLOW FUNCTION IN CARS? HERE'S WHAT WE THINK

IF YOU WERE A STYLIST and were asked to design a product that was at once exciting, functional, would capture the imagination of thousands, would stir the desires of all, that was flamboyant and still not vulgar—what would you do? Where would you start: In your own mind? In talks with other stylists? With the manufacturer of the proposed product? Or, with the intended customer? And how would you compromise all these wants into one package—to meet *all* requirements?

Once you had completed your design in charcoal and paper and had molded the cold, clammy clay into a living thing, would you then be sure that your creation was right? Or would you again contact the customers, asking them for their opinions, hoping they would do more than cast disdainful looks or placating smiles? Or instead, hope that by mere saturation, by sheer force of numbers, your design would become accepted?

Apparently, and unfortunately, the path which stylists have taken (or been forced down) in the past few years would lead one to believe that the all-for-one-for-all, make-it-like-theirs-or-it-won't-sell logic is the philosophy that must be followed. *Does it have to be?*

Whatever we have today is constantly undergoing a styling change. Look about you: telephones, desks, chairs, houses, irons, lamps—all change. You progress thru change. We can't afford *not* to change; if we do not, then we might as well return to Yesterday and the Land of Status Quo.

Those changes that have come about in cars have been myriad in number; but, grouped in order of importance, the biggest changes wrought have probably been in appearance. And why not? Outside of ethereal things, like air and sound, what affects

us more strongly than the sight of a beautifully molded object?

If you're like the greatest percentage of our readers (among those who wrote to us about our editorial in June, "Sounding Off on Style"), your heart palpitates each time you see a Mercury Montclair pull alongside. Among the readers responding, 14 per cent chose the Mercury Montclair as the best-looking 4-door sedan of 1955, with the other 86 per cent choosing 17 other distinct makes. That is hardly an overwhelming majority, which either encouragingly points up a lack of "oneness" among our readers, or indicates that many readers chose their own car (in actuality or desire).

When it came to choosing the best-looking car regardless of body style, or the most esthetically styled car, there was even less conclusiveness among our readers. From 20 cars (or models) listed as 1st choice, 11 per cent chose the Plymouth hardtop.

When it came to answering our question, "Are we justified in criticizing styling?" you readers gave us a resounding vote of confidence. Eighty per cent answering the question said "yes," with 16 per cent of those giving their nod with some reservation.

The "pro" side of the argument can best be summed up by comments from readers William Miller, Jr., of San Antonio, Lew Winker of Minneapolis, and S. A. Greever of Dallas. Texan Miller said, "Your business is automobiles, and outside of highly technical mechanical details, what else is an automobile but style?" (Ed. Note: At least one manufacturer agrees with this philosophy, for D. C. Woods of the Product Planning Dept. at Ford Motor Co. publicly stated, "Since World War II all the companies have decided eye appeal is just as important as ride appeal and horsepower appeal.") Minnesotan Winker wrote,

OK

AND HERE'S WHAT YOUR FELLOW-READERS THINK

... The trend in design should be toward good, substantial, rugged, high-powered, medium-sized automobiles, featuring quality construction ...

C. Needham

Omaha, Neb.

... Should you decide to comment on styling of the Detroit things, you could adopt a standard paragraph to cover all of them, since they are so much alike ...

J. Johnston

Los Angeles

... I think we overlook color in evaluating [styling]. Some cars have to be 2-toned to be at their best, others are seen to best advantage in the so-called standard form ...

Robert Bannon

Montpelier, Vt.

... If Detroit wasn't making a very good car, why would it sell? The ones that are screaming about U.S. cars are the few who would sooner drive a Continental or Duesenberg, like me. What they don't stop to think about is that the manufacturers are doing their best to get good visibility ...

Fred R. Lakoduk

Bismarck, N. D.

... As an automobile salesman, I can say that the average buyer purchases an automobile because he likes the styling of that particular make ...

Richard Lloyd

Leonardtown, Md.

... Let's get rid of hood spears, dashboard handles, levers, control shafts, protruding and sharp bumper guards ...

C. Duane Wright

Mt. Vernon, Ill.

... Style is an intangible thing, which can be influenced by the person's background, likes and dislikes, and even favorite color. Personally, whether a car is a barge or not has little effect ...

Robert M. Fleming, Jr.

Pittsburgh, Pa.

... There are different *basic* reasons why people purchase cars year after year. Some merely buy for necessity ... for prestige ... for [economy]. Still, there are those who buy for performance, styling and looks becoming secondary to them ...

Leo E. Tippet

... I get one helluva kick out of these "experts" who seem to think that car design is out of line with our 1955 style of life. Don't these guys realize that automotive designers are intelligent, well-trained men who keep their fingers on the pulse of American thinking? ...

Ralph L. White

Springfield, Mass.

... I think modern styling with the cut-up lines and/or the paint and chrome haphazardly slapped on must make the real artist lay awake at night ...

W. Dean Fyock

Mercersburg, Pa.

... Really honest reporting on [styling] would probably hasten the day when the various manufacturers will introduce styling dictated by good engineering and not dictated by their sales department's ideas ...

George V. Clamp

Colorado Springs, Colo.

by all means discuss styling of the cars you report on. We can take your opinions for what *we think* they are worth, as long as they are not forced on us ... Texan Greever thought there wasn't enough difference among cars to raise one's blood pressure, but that most of us "... are opinionated extroverts to some degree [and] the subject becomes an extremely interesting controversy—one in which the various enthusiast factions are permitted to flip their respective lids thru the medium of a popular periodical ..."

By letting you "flip your lid" we provide one more way for you to let the manufacturers know what you want in new cars. To gauge public opinion they now have their "dream cars," their market analysts, and their sales of current products. We see differences of opinion and don't agree with Jeffrey Hoff of Ann Arbor, Mich., who wrote, "I feel that most people are informants at heart, and buy what they think is the people's choice ..."

"The problem," says Major Harold Wells of Eglin AFB, Fla., is not whether you should [discuss styling], but where is the line from which you depart? ... From a purely esthetic point of view, the car would be viewed as a whole unit, and the unit of measure would be an arbitrarily selected artistic shape. I doubt that such a shape exists, except in each person's mind ... Perhaps the answer lies in what reader David Cummins of Los Angeles has to say: "Basically, form must follow function, for everything, no matter what it may be, must have a reason for its existence." It would appear that this is in tune with current thinking at General Motors, where Marsden Thompson of the Customer Research Staff has publicly said, "... the

public is pretty demanding, and quite sophisticated, when it comes to appraising new-car designs. First and foremost, they are quick to notice things which might be impractical or undesirable from a use standpoint. While functional design is an overworked phrase, ... anything which isn't functional will be promptly observed and complained about."

We agree that functionalism is important. We kept that in mind last year and this year too in selecting the best-looking cars of 1954 and 1955. It is our opinion that esthetics *can* be combined with a functional design. And so, in our future analyses and comments about the '56 cars, we will be as objective, as practical, as forthright as possible. At all times we will be sure that you know it is *our* opinion; whenever it becomes necessary to bring in outside viewpoints, we'll make it clear.

We will keep our discussion on a practical level. For example, we see little reason for bumper "bombs" that don't protect your own grille and may serve to damage the rear deck of another car, wrap-around windshields that cause distortion and discomfort in getting in or out, chrome splashed about indiscriminately or in a location where it will only serve to reflect glare into the driver's eyes, tail lights that are so big and bright that they cause momentary blindness to the driver following, instrument panels designed for their esthetic value alone, or a car that may look wonderful until you try it on for size.

You may praise us for it, laugh at us, or even heap coals upon our heads. Whatever you do, it will be an expression of your opinion. We don't want to be a leavening agent between you and the manufacturers; we would rather be the catalyst that causes you to burst forth with ideas and suggestions.

WHAT HAPPENS WHEN WE APPLY THESE CRITERIA TO THE 55'S? ▶

MOTOR TREND

The 300 has a cleanness of line that is too infrequently seen on cars of today. It is ample in size (inside and out) and is still compact. It is functional, yet exciting. It is modern, without following the present squarish trend for which Chryslers of the past were ridiculed. The grille is simply done; no massive bumper or other appendages mar its smooth front contour. Chrome has been used tastefully and smartly. No garish outcroppings detract from its main purpose—to look like a car. It is a car that goes with contemporary living.

selects the best.



1 The CHRYSLER 300—1955's most esthetically styled car



The FORD THUNDERBIRD 2



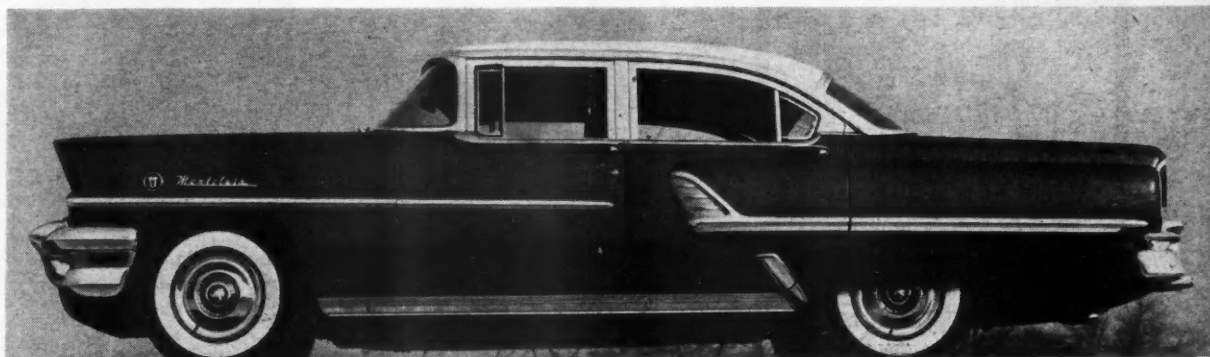
The CHEVROLET NOMAD 3

Overall consistency of design . . . Width, height, length ratios show excellent proportion . . . It's small . . . Hardtop version has very classic look . . . Pretty well dechromed and clean-looking . . . First and foremost a car for comfort and looks.

It's compact . . . Clean in design . . . Quite utilitarian . . . Unusually successful combination of form and function . . . Has an elegance that you don't often see in a small car . . . not something left over from the classic era, but a real 1955 elegance.

looking cars of 1955

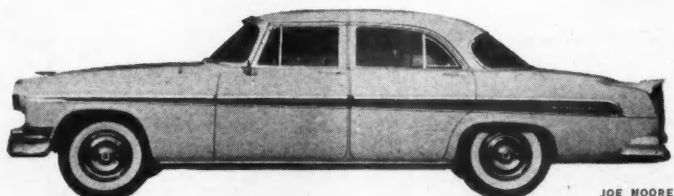
The Montclair has a continuity in its overall appearance that is not detracted from by excessive splashes of chrome, color, or gimcrackery; grille, top, sides, rear, all seem to flow together as a unit. Even tho it has resorted to some of the present-day styling "gimmicks" (such as hooded headlights, wrap-around windshield, and large tail lights), they have been employed tastefully. It has left a lasting impression with us.



1 The MERCURY MONTCLAIR — 1955's best-looking 4-door sedan



2 The IMPERIAL



3 The CHRYSLER NEW YORKER

Detailing has decided quality. . . .

Appears to be alive, poised on tiptoes. . . .

No gimmicks, despite use of tail lights on fenders. . . . Very handsome rear bumper. . . . Restrained front end. . . .

Grille is exceptionally clean. . . . Full wheel cutouts serve to emphasize motion.

Has adequate length to overcome problems of a 6-passenger envelope. . . . Good tail light treatment. . . . Fender contour, in relation to body as seen from front, gives it sleekness. . . . Heavy grille contrasts with sleek look. . . . Lean, clean lines from side view.

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6TH ANNUAL INTERNATIONAL MOTOR REVIEW

PAN PACIFIC AUDITORIUM—LOS ANGELES
Oct. 14-23 (see page 49)

* RAMCOTE Flexible Finishes for Leather and Vinyl-Plastics *

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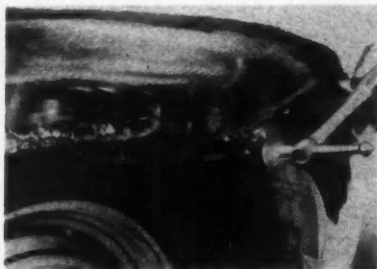


Components of a typical Fiberglas repair kit include paper cups
and spoons to assure cleanliness. Exact measurements are a must

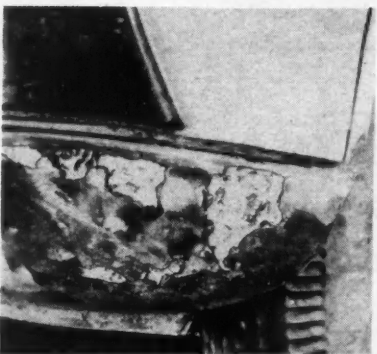
Fix it with Fiberglas

by Al Kidd

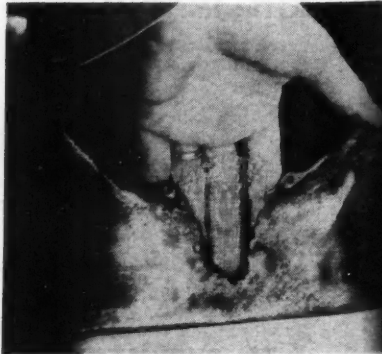
BODY REPAIR has been one phase of
automobile maintenance almost com-
pletely out of the question for even the most
ardent do-it-yourself fan. But now, one word
takes bodywork off the "don't" list and puts
it right in your lap. The word is Fiberglas.
Almost any conceivable damage to the body
of your car—dents, holes, rusted portions—
all can be easily repaired with Fiberglas
patches. Kits like that of Taylor and Art, Inc.,
of Oakland, Calif., are appearing on the
market for just this purpose. They differ, but
only slightly. Our information comes from



Using a hammer, indent the surface to be
repaired below the surrounding contour.
This allows room for Fiberglas buildup



When large holes are to be patched, stuff
newspaper behind them to act as a back-
ing and contour guide for soft Fiberglas



When possible, apply Fiberglas to both
sides of an opening. This lets the pieces
bond together to form a very strong repair

Chevrolet, which makes a kit for dealers. Chevrolet has complete confidence in this system, which is fast and strong.

With any type of Fibreglas repair these are important preparatory steps. As in painting, cleanliness is essential, and in the case of Fibreglas we must add dryness. Resins just won't adhere and set properly if any moisture is present. Chevrolet garages use heat lamps to keep the metal warm and dry. If you have any sort of heat lamp or even a household heater, it will be helpful. If not, pick a warm, dry, sunny day, then get the car right out in the sun and leave it there all thru your work.

Clean the area to be worked on with a hydrocarbon solvent (benzene is one) and sand it to the bare metal about 6 inches around the actual portion to be patched. (A disc-type power sander is the best for this or you can use a file and sandpaper. If your repair job is very extensive, it would be well worth while to rent a disc sander for the day since quite a bit of rough sanding will be required on the Fibreglas itself.)

When the area is well sanded and thoroughly clean, the actual portion to be fixed should be indented below the surrounding contour. Just hammer gently and actually indent it. The reason is to allow room for the Fibreglas to fill the area and later be sanded to match the surrounding contour.

All repairs are basically alike to this point. But different sorts of patches call for varying techniques. When you have to work on a panel where there is no access to the inside, all you can do is indent the area and apply the patch directly. If you want to patch a large hole in an unsupported area (like a fender), stuff the hole with newspapers till it assumes the general contour desired. You can remove the newspaper later but it will give the Fibreglas a temporary backing.

Where you can work easily on both sides of a hole, the very strongest type of patch is possible. In this case, build up Fibreglas on each side of the hole and the 2 portions can bond together. This is excellent on smaller holes of the type that result from de-chroming or in changing the shape of a fender cutout. Don't try this patch with too large a hole; you'll have trouble getting the proper contour. If you plan to mend a rusted-

out portion, take special care since the adhering surface is limited. In addition to indenting the area, punch holes liberally around the rusted section. This allows the Fibreglas to seep thru and clamp itself to good metal rather than weak rusted metal.

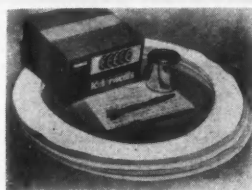
Application of the Fibreglas is more or less the same in all cases. Here's where the heat and dryness become especially important. Before applying any resin or Fibreglas be sure that the metal is absolutely dry and preferably warm. Then mix the resin and cut out Fibreglas patches to the proper size. (At least 2 layers of Fibreglas should be used, and more may be necessary according to the proportions of the job at hand.) In any case cut them out in advance—you won't have

time once the patching begins. Take care with the mixing of the resin, no matter what type of kit you may be using. Cleanliness is a must and most kits supply unwaxed paper cups, but any clean receptacle will do. Proportions are critical. Follow the instructions carefully and be as exacting as a doctor in your measurements.

Resin is irritating to skin, so all thru the process be very careful about getting the mixture on your bare hands. The best out is to wear rubber gloves.

To begin the actual patching, put a fine coat of resin on the area with a wooden paddle or similar applicator. Then place a Fibreglas patch over it and saturate the patch with resin. In some cases it may be handier to

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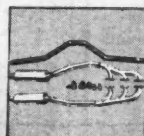
(five-tire \$11.95) or \$11.95 for a four-tire Kolorwall kit (five-tire \$13.95) and we'll send you a free set of curb feelers to help keep your sidewalls clean. Be sure to specify color. If you aren't completely satisfied with your Whitewalls or Kolorwalls after applying according to instructions, return the kit for a full refund. Item #1C.



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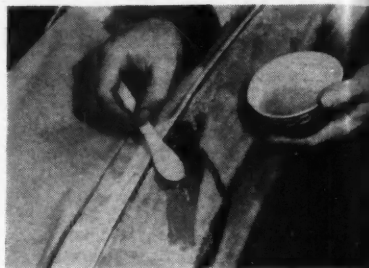
Fix it with Fiberglas

continued

saturate the cloth before applying it, especially if the patch is a large one. Repeat this process using as many layers of Fiberglas cloth as necessary, each time carefully smoothing the patch to remove bubbles and wrinkles. When the desired thickness of Fiberglas is attained, cover the patch and surrounding area with Saran Wrap. This keeps moisture out and helps to keep the patch in place while hardening. It's a lot more effective than cheaper substitutes.

Now the curing (or hardening) of the patch begins. Again, if you have a heat lamp, position it about 10 inches from the patch for rapid curing. If not, the sun will do but it will take a little longer. The curing is normally completed in a matter of minutes—you can check for hardness with your fingernail. If there is any trimming to be done (as around a fender opening), do it after the Fiberglas has jelled but before it is completely hard. At this stage it can easily be trimmed with a knife or razor blade. It demands no truly professional skill, but don't plan on doing something else with your other hand, because you may need it unless you work fast.

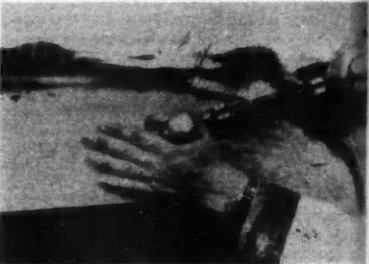
After the patch is completely hard, work it just like metal. In the absence of a disc sander a file is the best bet for smoothing. File from the edges of the patch toward the middle to gain the desired contour. Here again, it's best to wear gloves since bits of hardened Fiberglas are irritating to the skin. Any small cracks or air holes can be filled with the remaining resin (mixed with finely chopped Fiberglas if necessary). Finishing Fiberglas is exactly the same as finishing metal (see "Car Complexion Care," May '55 MT). If you're not a good man with a spray gun you can still save yourself a lot of money by doing the patching and then getting a professional paint job. If you can paint too, better start deciding what to buy with the money you'll save.



With Fiberglas cloth in place, apply the resin with a clean applicator, carefully smoothing surface bubbles and wrinkles

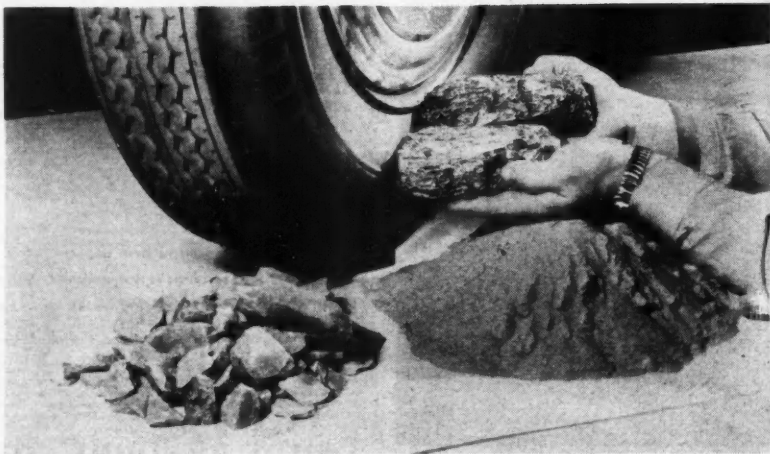


When the Fiberglas buildup is complete cover the patch with Saran Wrap to keep moisture out, support patch while curing



The thoroughly hardened patch is worked just like metal. File from the outside to the center to attain proper contour

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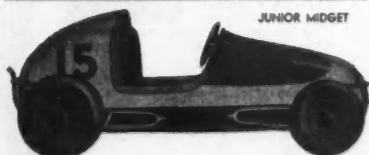
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Model	Price
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On the Road with Duncan Hines



*New England is the 1st stop in
MT's culinary tour of the U.S.*

I HAVE OFTEN BEEN ASKED to name my favorite restaurant, hotel or motel and vacation spot. I have never done so because I believe there is no accounting for taste. This great country of ours is too large, first of all, to be able to narrow a choice down to a specific place or section.

I will say that my favorite country for traveling is these United States. I've traveled more than 1.5-million miles in the past 20 years through every one of the 48 states, Canada and Mexico. I will therefore commit myself to advising—"See America First."

Let us start with one of the most picturesque and hospitable sections of our country—New England. I choose this area first because it is the oldest part of the United States... the first to be settled and populated, and chockful of lore and history. It's famous for many, many things, including its culinary arts. This is the area for seafood—lobster, clams, scallops and many different kinds of fish. Many places serve roast turkey every day in the year.

One of the most famous is the Toll House at Whitman, Mass. It is 20 miles south of Boston on route 18. It is closed the month of February and all Mondays, except when a holiday falls on Monday... then it is closed on Tuesday. It is open from noon to 8 P.M. I advise reservations. Luncheons start at \$1.85 and dinners run from \$2.25 up. The doormat always reads "Welcome" and the carved wooden bellringer outside announces that you have come to the Toll House. This is a place typical of New England of the past and the present.

In the days when New Bedford whalers sailed all over the world, it was a famous stopping place for travelers. The original structure was built when Massachusetts was still a crown colony—in 1709. That first building is the lounge of today's Toll House. The Toll House has been added to 5 times

since it was opened under its present management. Today it serves about 2000 guests every day. At the Toll House you are a guest in every sense of the word. Ruth and Kenneth Wakefield have given real meaning to the phrase, "New England hospitality."

One of their most popular dishes is French onion soup, which the Wakefields discovered in a Paris wine cellar. Almost 2 pounds of onions go into every plateful. Indian pudding is another favorite. And Toll House lobsters, which must weigh almost 3 pounds before they can be served, are another specialty. The fried boneless chicken is superb, and so is the lemon pie, with its 3-inch meringue. Of course, the Toll House cookies have become a national byword.

New England is a wonderful place for vacation—winter or summer. Maine, with its seaside and lake resorts, and Vermont and New Hampshire with their mountain resorts have become very popular.

For example, the Green Mountain Inn at Stowe, Vt., is popular in the summer for a quiet vacation in beautiful country among those who do not like an organized vacation. In winter this place really hums with skiers, of course. There is everything for their comfort—waxing rooms, game rooms and frequent bus transportation to Mt. Mansfield ski slopes—about a 10-minute drive. Small pets are allowed in rooms of guests. It is open June 15 to October 15 and from December 15 to May 1. Rates vary according to the season. In the summer they start at \$52 per person per week.

Let's go up to Maine. It abounds with lakes, in addition to its unforgettable coast. The Maine climate is most agreeable in the summer—days are comfortably warm, the nights cool.

Travel up about 39 miles north of Augusta to Skowhegan and then 5 miles north on state highway 147. What have we here? The



Famed Toll House at Whitman, Mass., is recommended to all hungry visitors

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Lakewood Inn and Cottages. They are only open June 5 to September 15. Here we find a theatre, a country club, an inn, bungalows, gift shop and store. It abounds with beautiful cottages that have complete baths, fireplaces and luxuries you would not expect to find. It has 41 cottages facing the lake. Because it is one of the nicest places anywhere it is necessary to make reservations. The daily rate is American plan (with meals) and runs from \$11 and up per person for a double with bath.

Doubling back down to the smallest state in the Union—Rhode Island—stop at the **Larchmont Inn.** It is on the coast and just 3 miles from Narragansett via U.S. 1. It is located at Wakefield, which is 98 miles east of New Haven. This colonial inn is a nice place to stop. It has large furnished rooms ranging from \$5.50 single to \$12—all of them with bath.

Then, going on over to Connecticut, stop at another one of the oldest restaurants in the United States. The Nutmeg State abounds in wonderful eating places, and **Dorlon's Shore House** holds up the tradition. Three generations of the same family have managed this restaurant and have maintained its tradition for real New England shore dinners. Of course, if you are tired of seafood, you can order steak or chicken. Dorlon's can be reached by going to Norwalk and then out to Dorlon's point—from Stamford to Bridgeport. They serve from noon until 10 P.M. and are open from May 1 to November 1—but closed on Tuesdays. Luncheons range from \$1.25 to \$3 and dinners from \$2.75 to \$5.50. It is a good idea to make reservations here, too.

Happy motoring!

Next month—Duncan Hines, in his regular monthly column, tells where to eat, where to stop, and what to see in the San Francisco Bay region, north to Washington.



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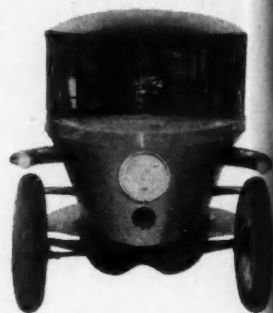
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PHOTOS BY BOB D'OLIVO

Hull-like, undercut lower body of the venerable Rumpler makes it look like a boat at times. Near-perfect streamlining of some portions is oddly at variance with boxiness of others. Solitary eye furthers streetcar look

RUMPLER

WITHOUT A DOUBT one of the most unusual and fascinating cars I've ever driven was a Rumpler Drop Car, circa 1921, owned by Vernon Jarvis of the Silver Springs Museum in Florida. Only recently Ralph Bullion (of the museum staff) restored the car, then accompanied Jarvis and the car to the opening of the Hollywood Autocade (a permanent auto museum in Santa Monica, Calif.). When I saw the Rumpler there I made it a point to find out more about it and to get behind the wheel.

There have been some strange tales about this car, among them that it was designed to be dropped from dirigibles, that it's an aqua car (see MT, August '55), and that it's amphibious. None of these stories are true; they're all press agents' wild imaginings. There is certainly a close resemblance to the control cabin of a dirigible, and the degree of streamlining (tho erratic) is remarkable for 1921.

You can see from the photos that to get into the car is a long step up. With the 2 middle jump seats folded flat into the floor you step around to the front of the "pilot's" seat, and slip down behind the large-diameter steering wheel. (The rim of the wheel is so big that a woman's hand would just barely fit around it.) The instruments and switches are located in front of you on a wooden panel: the key starter and warning lights are in a cluster on the extreme left, then reading from left to right come the electric heat gauge, the speedometer and odometer, the fuel level indicator (manometer), below it the horn button, and the oil pressure gauge. The spark and gas control are on the steering wheel (like a Model T), with the air-fuel mixture control attached to the side of the seat; the gearshift is on the floor to your right, with the handbrake to its right.

Foot controls consist of accelerator located between the clutch and brake pedals. If you don't think this is confusing just imagine hitting the accelerator when you should be braking!

After my initial check-out by Ralph Bullion, I tried a test hop myself, with a full complement of passengers aboard. As I switched on the key and pushed the starter button, the starter gave forth with a whirring sound, then as the engine caught the noise was replaced with a "chug-a-chug-a-chug-a." I pushed in the clutch, shoved the gearshift forward into 1st, slowly released the clutch, and we eased forward. At about 15 mph I shifted into 2nd (down, over, and up) and at 30 double-clutched into 3rd (straight back).

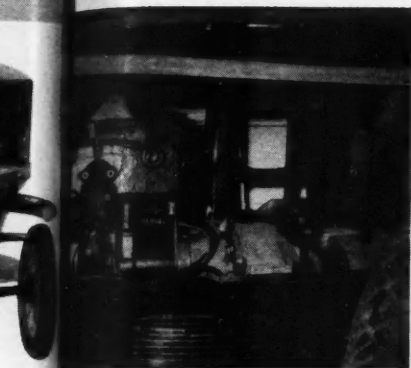
Even tho the water-cooled 4-cylinder Continental engine is in the rear, I could hear it pulsating as we picked up speed. It wasn't long before we were cruising along at 40-45 mph. (Ralph tells me he's had it up to 60.)

Vision to the front and sides is incomparable, with an expanse of glass starting at your left shoulder and making a complete 180-degree circuit. To the rear it's another story—there's a tiny hole above the engine compartment thru which you can peer, but it's much better having a co-pilot, who can even assist you when you want to change lanes (even tho you have metal flag turn signals).

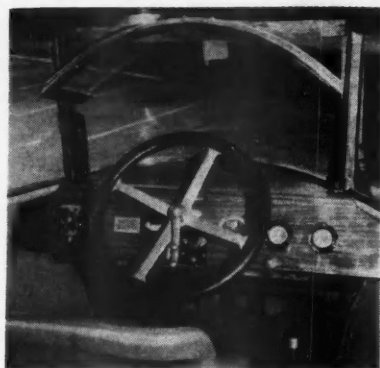
The ride afforded by the quarter-elliptic springs (fully 5 feet long each) front and rear gets better the farther back in the car you are: up front I noticed all the changes in road surface, while Pete Molson and Bob D'Olivo in the rear seat praised the ride and seat.

Changing the Rumpler from a straight course is not a job for the weak of heart or limb; the steering is exceedingly stiff, even when you're rolling along at a comfortable speed. This,

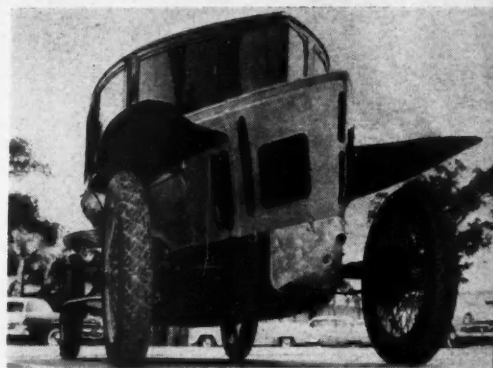
POWERPACK PLYMOUTH



age Continental 4 powers Rumples
on rear. Note big leaf spring (bottom)



Forward visibility (and ventilation) is
great; steering ease rates close to zero



To rear, a sort of tunnel vision is pro-
vided by the V-shaped casement window

its wheelbase of 140 inches, won't win it any ease-of-handling laurels. I jokingly proposed to drive the car back to Florida for Jarvis, but I don't think I'd be up to it. Stopping is another problem that Bullion hopes to lick. I jammed on the foot brake with all the weight and pressure I could command, while Ralph had to provide reserve stopping power by pulling back on the handbrake from behind me.

Driving the Rumples Tropfen-Auto I had the peculiar feeling that I should be on tracks: it's not unlike a trolley car. I hardly think that this is a car that will replace the trolley, however, or anything else for that matter. It is a most interesting car, though, and one that you should surely see if you're ever anywhere near the Silver Springs Museum. I'm sure happy I saw and drove it—even 34 years later.

NORMALLY, WE TEST 4-door sedans so that you can make better comparisons between makes. Also, when I drive another model I generally make it a sedan so that a like comparison can be made between models. In the case of the '55 Plymouth with powerpack (4-barrel carburetor and dual exhausts, 177 hp) it worked out slightly differently.

The Chrysler factory in Los Angeles was originally to provide me with a powerpack sedan, but the time came to fit it into our schedule and the sedan was not yet available. Instead, Bob Dietz, regional manager, offered me the use of a convertible. "It won't be as lively as the sedan, tho," he cautioned. "I know," I replied, "but it will serve to make a point." That point is this: powerpacks on the new cars are not entirely for giving them more power—they can be used to good advantage in replacing power in certain models.

Convertibles and station wagons are both heavier than sedans. In the case of the '55 Plymouth, the convertible weighs 354 pounds to the 4-door sedan's 3710 pounds. In terms of weight/power ratio, this is about 23.1 to 1 vs. 22.2 to 1. The result is usually less acceleration, less pull on grades, and sometimes less economy. You can get the power up to where the weight/power ratio is equal to or more than the sedan, the resultant performance would also be that much better. The powerpack does just this, dropping the convertible's ratio to 21.7 to 1. By comparing test figures on both cars we can see how this worked out in acceleration:

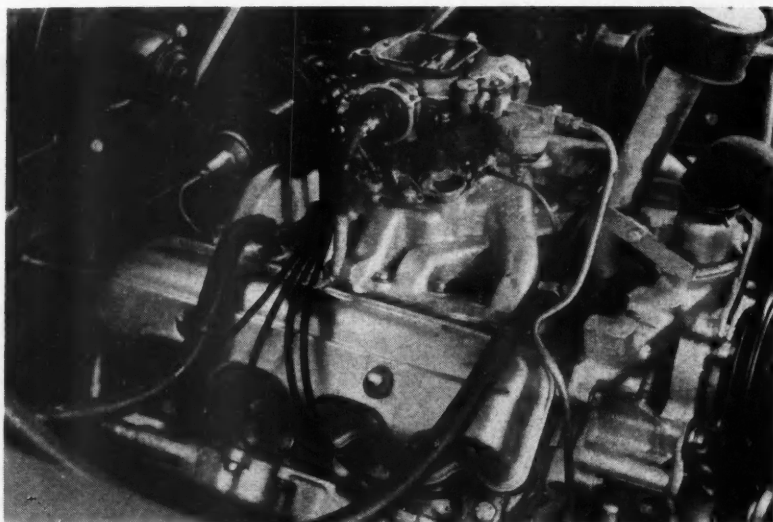
Test Condition	167-hp Plymouth	Powerpack Plymouth
Standing 1/4-mile	20.3 sec. (69.5 mph)	19.7 sec. (74 mph)
0-60	13.2	13.1
10-30	4.2	3.8
30-50	5.5	4.6
50-80	16.2	14.5

You can see for yourself that the performance of the powerpack Plymouth (even tho heavier) is better than that of the stock Plymouth. It's evident from both the standing start 1/4-mile and 50-80 mph runs that most of the additional punch comes at the upper speed ranges. As far as shifting technique is concerned, all runs were made in DRIVE range, since

using LOW above the automatic upshift at 62 mph gave no better time or speed.

As far as fuel economy is concerned I did not make any level-road, steady-speed checks, but I kept accurate check of the Mobilgas Special I used. In driving 609 miles over highway and thru week-end town traffic, the car averaged 14.0 mpg. The test Plymouth sedan got 15.0 mpg for 1134 miles.

I'll have to admit one other thing: it's pretty nice driving around in a convertible like the Plymouth in sunny climes. When it was warm, down went the top; when too warm, up it went with the rear window open. Frankly, I don't think anything will ever replace the convertible. (Continued)



Aircleaner has been removed to show innards of powerpack Plymouth's 4-barrel carburetor. With dual exhausts, it gives V8 a modest boost of 10 horsepower (total 177)



DON MACDONALD

BLOWN VW

ONE OF THE VARIED ACTIVITIES of Art Stuart's X-Ray Laboratories is being a dealer for the Pepco supercharger. This little (17 pounds, 4 x 6 x 8½ inches) unit is made by Progressive Engine Products Co. (647 West South Street, Akron, Ohio) and fits any engine up to 91 cubic inches. Kits are available for MGs, VWs, American Motors Metropolitans, Morris Minors, and Austin A30s and 40s. Essentially, it's a 3-lobe, Roots-type, and the straight-cut gears sound like 10 screaming banshees at top rpm.

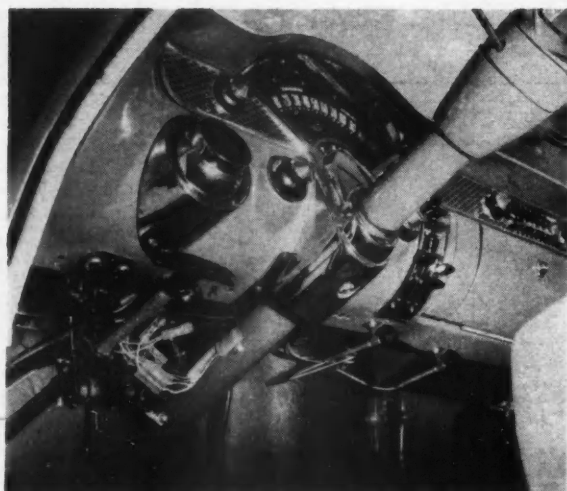
AIR-CONDITIONED NOMAD

THIS WAS no ordinary wagon. Aside from having every conceivable driving-ease extra, it was equipped with Chevrolet's air-conditioning system. Hitting Balboa Island just as the morning mist lifted, we checked temperature and relative humidity within the smooth-rolling wagon (windows open, air conditioner off) and compared the readings with those outside. It was 3°F cooler inside the Nomad, but humidity was 47 per cent, compared to 43 per cent outside. Outside it was 80°.

Buttoning up the wagon, turning on the air conditioner, humidity took a nose-dive to 28 per cent within 5 minutes. In another 3 minutes it leveled off at 27 per cent, with the system's blowers turned from high to low position. Inside temperature was down to 71°.

Later, with outside temperature hovering above 90°, we took a 41 per cent humidity reading. And inside the sweltering Nomad—it had been parked for nearly an hour with all windows and vents closed—our Taylor hygrometer showed a damp (52 per cent humidity) at 96°. (Car's cream-colored roof kept inside temperature considerably lower than it would have been.) But again, in 5 minutes the Nomad's air conditioner had lowered interior temperature to 80° (with windows still closed), dropping relative humidity within the car to an amazing 32 per cent.

In testing the Chevy conditioner's effectiveness under these heavy-load conditions, we had the blowers on full-bore, the fast-idle hand throttle out all the way for maximum compressor output, and the cooling air coming from the dashboard nozzles.



Chromed nozzle directs cool air; controls (right) are simple



JOE MOORE

With other power equipment, cooler fills engine compartment

We tried Art's Pepco'd Volkswagen the other weekend, and found a satisfactory increase in performance but also a higher noise level.

Most 36-horsepower VWs will do about 68 mph top. With a Pepco installed, blip jumps to 48 and top speed to about 75. More important, 0-60 acceleration can now be accomplished in approximately 21 seconds, allowing you to keep up with contemporary American traffic with little or no strain.

If you can stand the relatively low cost (about \$190 installed) and the noise, it makes a delightful little car even more so.

Varying conditions during a half-hour of observation illustrate the usefulness of the Nomad's cooler: Windows closed, air intake vents open, inside temperature 90°, humidity 47 per cent; windows, air vents open for a quarter of an hour, temperature 83°, humidity 37 per cent (normal summer driving conditions). Driving along for another 15 minutes with windows, vents closed, cooling system on maximum, temperature stabilized at 77°, humidity settled at a comfortable 29 per cent.

What did Chevrolet say we should have experienced while using their air conditioner? Fritz Bruder, sales manager of Hollywood's Lew Williams Chevrolet (we used Lew's personal Nomad for this pleasurable test) told us as we took off that we could expect a 10° drop from outside air temperature. (That's important, for it's the relief of a drop in temperature, not necessarily the actual minimum temperature that spells comfort.)

And Chevrolet Engineering issues this statement: "No other car air-conditioning system . . . parallels the Chevrolet system in ease and accuracy of humidity control, a factor long recognized as essential to all-weather comfort."

Ease? Yes. An aircraft-type knob, a small blower switch with a mate for your choice of inside (recirculating) air or outside air. Accuracy? We never noticed a change in comfort conditions once the system was set.

Is humidity control essential to comfort? Because we weren't equipped with scientific suits with built-in thermocouples at every seam, all we can pass along are the figures given here, and our personal comments. Not only was this trip enjoyable from the no-dust, no-windblast aspect; our dog didn't want to stick his head out the window.

FIRST IMPRESSIONS generally stick with you for a long time, way after you may have formed an entirely different opinion from the one you had originally. It's so with the Studebaker coupe. I remember getting the feeling when I 1st sat in the hardtop coupe (right after the '53 introduction) that it was more like a sports car than any other hardtop I'd been in. Today when I sat in the Speedster I felt exactly the same way. The wheel is more or less in your lap, your legs are out horizontally (but not too much so), the windshield is close to you, and to further the illusion, not only are all the gauges big, circular, black-and-white dials (Thank heaven someone had the courage!) but there's also a tach.

What's the good of a tach in such a driving? One time I started in LOW, moved with win- the lever to DRIVE, but no shift came. A sudden glance at the tach showed the needle rapidly climbing over 5000 and I backed off on the throttle. Without the tach I might have dangerously over- revved the engine.

To go with the Speedster's feel of a sports car are its exceptional handling characteristics. You can throw it into a turn that would find you in the brush with another car, but you can sense when it's about to go out of control. So, with a turn of the wheel (too many turns, true) and more throttle, you're out of trouble. To go with its good roadability is its equally good ease of handling. Its size, power, visibility, and light steering all add up to making it a package simple to whip in and out of traffic.

The 185-hp engine in the Speedster gets it from point A to point B a bit faster than the adequately powerful President engine. From a standstill to 60 mph takes around 12½ seconds (a second better), and from 50 it gets to 80 in about 13 seconds (2 seconds faster). The Borg-Warner automatic transmission shifts out of low into intermediate, then into high with considerable smoothness. It's only at the lower speeds when you floorboard it that you get an uncomfortable lurch.

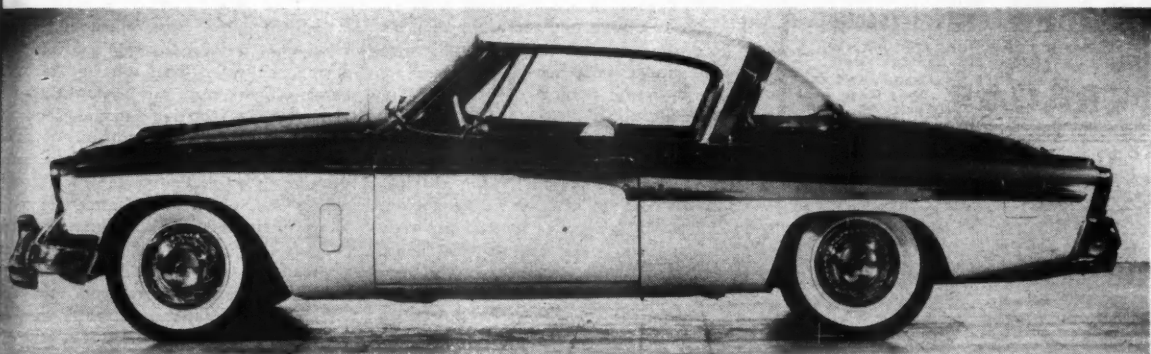
Traveling fast over rough asphalt or concrete, there's too much shake in the car, but on smooth surfaces and at very high speeds I never once felt uneasy. Don Mac-



BOB MACKENZIE

Driving position is still unlike other cars', makes the Speedster fun to drive

Donald, who rode as my passenger from Chicago to Detroit, said that only once did he begin to feel uncomfortable and that was when I approached a curve which he thought I was taking too fast. The centrifugal force started to make him lean toward the door, but as I gave it more throttle he straightened up. As he put it, "My confidence in the car was restored."



DURING A RECENT STAY in Detroit I had an opportunity to get away from the sweltering, over-90° heat by driving a '55 Dodge with air conditioning. The 1st time I got into the car it was scorching inside and out. I turned on the blower, set the conditioner at COOL, closed the windows except for one vent, and drove out into traffic. For just the 1st few minutes I felt uncomfortable, but within a short 10-minute period I closed the windvent and began to enjoy the fresh, cool air.

Driving on out of the city I soon began to enjoy another little-publicized advantage of an air-conditioned car. Fishflies, sometimes called June bugs, began to splatter the windshield.

I saw other drivers fight them out of their cars I breathed a sigh of relief.



Simple controls of Dodge's AirTemp conditioner, requiring no stretch from driver, make installation a cinch to operate



BOB MACKENZIE

Only outside indications that car is air conditioned are hooded intakes at rear quarter. Outlet keeps rear passengers cool

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- CF-50—Cad and Olds to '49-51 Ford & Merc
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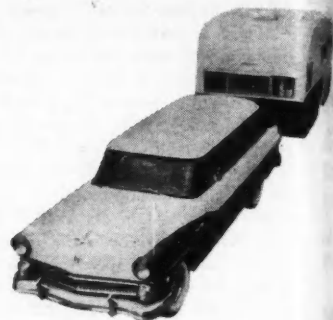
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Tempted by a Trailer?

by Jim Potter



VACATIONING NOWADAYS takes on a home-like atmosphere if you follow the growing trend to pull a trailer (particularly one of the popular 15-foot "vacation" trailers) on that 2-week jaunt into the back country, or to the South now that it's thinking of getting chilly again.

We did just that recently, using a 1955 Ford Ranch Wagon powered with the 162-horsepower V8 and equipped with overdrive (automatic transmissions are also excellent) to do the job of towing a 1500-pound (minus our baggage) Lakewood trailer. Just about any of the '55 cars have the necessary power to pull a vacation trailer of this size; however, the heavier-built and more powerful car will come out ahead at the end of a trailer-pulling stint because of less wear and strain on the engine, transmission, and differential. It's a good idea, too, to check carefully with your car dealer: some new-car guarantees are voided by trailer pulling.

Our trailer had facilities to sleep 5, a sink, ice box, 3-burner butane stove with oven, ample closet and cupboard space, and a large luggage area for our fishing and miscellaneous camping equipment under the one ready-made bed. It rented for \$35 per week.

Hooking up the trailer to the Ranch Wagon was a fairly simple task. You have to buy or rent a hitch that attaches to the frame of the car; bumper hitches are not satisfactory. A satisfactory hitch can be bought for about \$10, and installed in a matter of minutes. Avoid a rear-axle overload of more than 500 pounds. With a heavy trailer it's best to use a dolly and retain the car's standard springing. If no dolly is used, overload springs or Air Lifts are suitable. Electrical connections for the trailer's running side and tail lights, signal, and stoplights mean you have to make a temporary tie-in at your car's tail light. The Ford's 6-volt electrical system was inadequate to operate both the trailer's and car's signal lights, so we hooked it up to only the trailer's set. In many cases, tho, a heavy-duty generator will provide enough power for car and trailer lights. It's a very good idea, too, to readjust your headlights to compensate for the nose-up that will result from the weight on the rear.

Obviously a trailer of any size requires its own brakes—the electrically actuated ones are very good. Most dealers will not accept guarantee responsibility if hydraulic brakes are tapped into the car's system. In any case it's best to have an expert do the brake hookup, and be sure.

Overheating can be a problem while pull-

ing a trailer, so keep an eye on the temperature gauge. There are several cures for overheating, the simplest being to use a permanent antifreeze (that doesn't mean you should leave it permanently in your car). Other variations that help are changing rear axle ratio, and using a larger radiator or fan or a higher-capacity pressure cap.

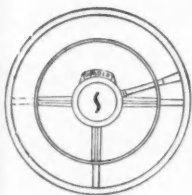
How about the difference in the way our car handled and performed with a ton of rolling weight attached? At 1st, the drag that the trailer added was very noticeable. The acceleration loss was obvious immediately, so we heeded the advice given us by the trailer rental firm and kept our rig on the right side of the road at all times so faster traffic could pass easily. In city traffic it's a good idea to watch the signals so as to hit the green light whenever possible. Eliminating unnecessary stops paid off by reducing the extra strain on our car (and nerves). Quick stops can be downright dangerous, so we kept our distance (about 300 feet) from the car in front of us.

Shifting gears is important when pulling a trailer. It was easier on the Ford's engine to stay in low gear until the rig was rolling along nicely before shifting into 2nd, then to shift into high at about 30 mph. When approaching a hill (if traffic conditions permitted) we speeded up to avoid some shifting, but always shifted into 2nd if we slowed to 25 mph, and to 1st below 20. Overdrive made it possible to shift down to conventional high gear with the accelerator alone. And, in mountainous country, we kept the car in 2nd gear (both overdrive and conventional). Speaking of curves, we soon learned that taking them fast was a dangerous performance.

Speed limit with a trailer in most states is only 45 mph. We tried it at higher speeds and found that altho control was maintained, we could sense the dangers involved. MT doesn't recommend higher speeds under any circumstances. That load behind you could turn into a veritable weapon should your brakes fail to function.

The test of the 162-hp '55 Ford (Ford MT) reported a fuel consumption of 11.4 miles per gallon tank average for 1386 miles. Pulling a trailer for 770 miles, which included considerable driving over so-called "high-gear" mountain roads (from sea level to 7200 feet altitude), brought fuel consumption down to 9.7 mpg (or an overall loss of 28 per cent). This fuel consumption would drop even more if you pulled a larger, heavier trailer.

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MOTOR TREND/SEPTEMBER 1955 55

Motor

by Al Kidd

A prevailing rumor has been that AAA and SCCA are on the outs. Speaking before SCCA's Detroit region, Jim Lamb, Secretary of the AAA Contest Board (and SCCA member) made a big step toward clearing up the rumor. Said Lamb, "AAA regards SCCA highly. Our one thought is to cooperate. However, we will never sanction a road race, in which speed is the determining factor, on the public highways . . . no one has the right to deny the public access to roads that they have paid for." But Lamb emphasized the AAA's interest in establishing good Grand Prix courses in this country and said that AAA would sanction rallies or trials on public roads in which existing speed limits were observed. He hinted too that on government-owned thoroughfares, such as the Blue Ridge Parkway, it might be possible to close the road down for an all-out race . . . A Ford Zephyr driven by Messrs. Preston and Marwaka plowed 2490 miles thru Kenya, Uganda, and Tanganyika to win South Africa's 3rd Coronation Safari, a reliability trial . . . Johnny Thomson, who has been the hottest driver in the circuit, was leading the AAA 100-Mile Championship Race at Langhorne, Pa., but

a crash took him out of it and then rain before the halfway mark took everybody out of it. A week later the race started again with Jimmy Bryan leading on the 44th lap. Nobody caught Bryan but just 10 seconds behind him was smooth-driving Bob Sweikert, current AAA point leader. Watch Sweikert—if his cautiously consistent tactics pay off he'll be the first campaigner since Wilbur Shaw to win Indy and AAA in the same year . . . The fast-growing (261 members) Jaguar Owners Association held its 1st big annual meeting in Quebec. With a big turnout, events galore, and royal Canadian treatment throughout the meeting, "Canadian Capers" promises to become a much anticipated yearly event . . .

Just after the Le Mans tragedy, Mercedes-Benz' Chairman of the Board, Dr. Koenig, spoke at a special press conference: "We do not . . . intend to sacrifice in further racing events our respect for human lives to technical development showing the limits of human potentiality. We have already some time ago decided not to take part in Grand Prix races in 1956 . . . we seriously consider

the question whether we shall not be obliged to retire from Grand Prix racing already this year if the requirements I have mentioned [for safety and fairness to spectators and drivers] are not met." . . . A Zandvoort, meanwhile, Fangio roared to a Mercedes victory in the Dutch Grand Prix to all but clinch his 2nd straight world championship . . .

If NASCAR's Bill France has his way (and he's already signed the contracts) there will be a new Daytona Beach speedway by 1956. Plans call for a big 2½-mile triangular asphalt track with accommodations for 80,000 spectators. The 300-mile race for Indianapolis cars is contemplated for 1956, and to wind up 1957's Speedweek (it will be a month or then): a 500-mile stock car race . . . Down under, a group of Australians with Aston Martin DB3S sports cars formed a new competition team and tabbed it the Kangaroo Stable. Their 1st big effort was the 12-hour race on the Iles d'Or circuit. After a race-long duel with Ferrari, Kangaroo's Aston Martins settled for a substantial 2nd, 3rd, and 4th . . . After 53 cars had climbed 5.2 miles up Vermont

august

- 20, AAA 100-Mile Champ Race, Springfield, Ill.
- 21, SCCA Race, Akron, Ohio.
- 28, AAA 200-Mile Champ Race, Milwaukee, Wis.
- 28, AACA Glidden Tour, Niagara Falls, N.Y.

september

- 3-4, CSCC Race, Santa Barbara, Calif.
- 5, AAA 100-Mile Champ Race, Du Quoin, Ill.
- 5, NASCAR 500-Mile Race, Darlington, S.C.
- 5, SCCA Race, Kansas City, Kan.
- 5, AAA Hillclimb, Pikes Peak, Colo.
- 17, SCCA Race, Watkins Glen, N.Y.
- 17, AAA 100-Mile Champ Race, Indianapolis

october

- 1-2, SCCA Continental Divide Rally, Durango, Colo.
- 1, AAA 200-Mile Champ Race, Darlington, S.C.
- 9, NASCAR 300-Mile Race, Memphis, Tenn.
- 14-23, International Motor Revue, Los Angeles
- 16, AAA 100-Mile Champ Race, Sacramento

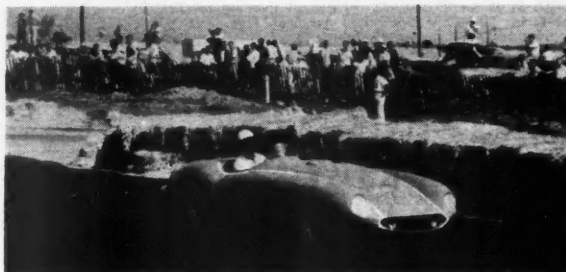
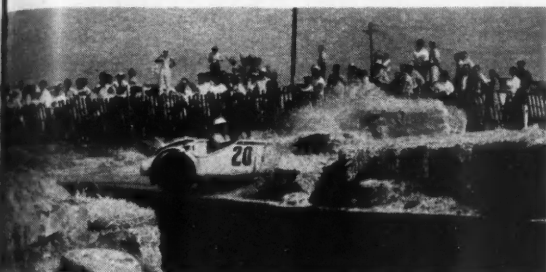
november

- 6, AAA 100-Mile Champ Race, Phoenix, Ariz.
- 20, AAA 100-Mile Champ Race, Las Vegas, Nev.
- 23-27, MSCA Great American Mountain Rally, New York.



Event winners strike a victory pose after the 2nd Hawaii Road Race. The races were held on a 2.34-mile Oahu airport course

what's coming up?



...all kinds of trouble at Hansen Dam's tricky Turn 2, but winner Ernie McAfee (lower right) gets thru it with ease

Haystacks in the city limits: a race for Los Angeles

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...t. Equinox, no one was even close to
...4:53.55 turned in by Bill Lloyd's
...erati. Aside from being new king of
...hill, Lloyd gets possession of the Bob
...ilder Memorial Trophy...

...ere's the latest box score for cars in the
...NASCAR Grand National Circuit:

Position	Car	Cars Running	Points	%
1.	Oldsmobile	143	414	.290
2.	Chrysler	57	235	.412
3.	Hudson	78	130	.167
4.	Chevrolet	50	85	.170
5.	Dodge	39	68	.174
6.	Mercury	21	46	.219
7.	Buick	16	36	.225
8.	Plymouth	24	15	.063
9.	Ford	10	6	.060
10.	Packard	6	4	.067
11.	Nash	6	4	.067
12.	Studebaker	10	2	.020

Other makes of cars competing, Cadillac and Lincoln.)

Le Mans and Levegh

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...Designer Brooks Stevens talked to race
...official Paul Faroux right after the Le
...Mans accident. Faroux told him that Mer
...edes wanted to retire immediately after
...vegh's crash but officials would not
...allow it. With Mercedes out of the race
...housands of people would have left, jam
...ing the roads and making it impossible
...to remove the injured spectators. Mercedes
...had great respect for Pierre Levegh, whose
...eat on the '55 Mercedes team was partly
...tribute to his heroic effort in '52. That
...ear Mercedes won when Levegh was
...forced to retire his leading Talbot after
...3 straight hours at the wheel.

LOS ANGELES, a hotbed of sports-car activity, had never had a road race within its city limits. But the competition-minded California Sports Car Club located a tortuously short (1.3 miles) twisting course near Hansen Dam. Up went the grandstands, snow fences, and haybales and on came the cars for the 1st Los Angeles Road Race. After 2 days of hot competition everyone knew that deceptively sharp Turn 2 was a hot spot and the crowds flocked there for the final race. The hay got a good workout (see photos) but nobody got hurt.

The main event was a 4-man duel. Tom Bamford with a big 4.5 Ferrari was the

1st leader. Then Bill Pollack took the lead away from him with the Baldwin Mercury. Bill Murphy's fast Kurtis-Buick was running a consistent 3rd. But way back in the pack and literally coming on like blue blazes (115 mph down the short straight) was Ernie McAfee on a gleaming blue Monza Ferrari. By the halfway mark McAfee had passed everything in sight and from then on the Ferrari just howled its way to the checkered flag and a 58.7-mph race average. It was a big day for Ernie and the 40,000 people who watched him, and at last Los Angeles had had its road race. (Continued on next page)



Pierre Levegh, shown here just before his fatal crash, employing the very successful Mercedes dive brake. It was used at Le Mans on all turns after long fast straights

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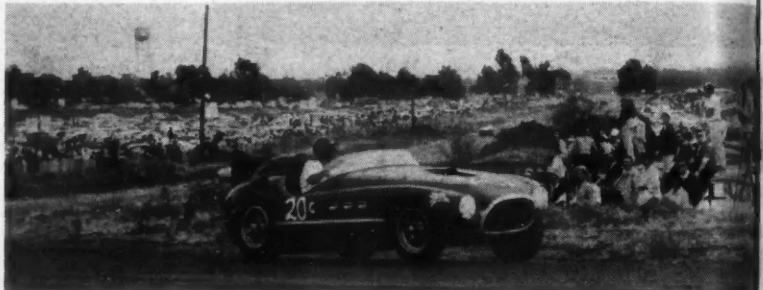
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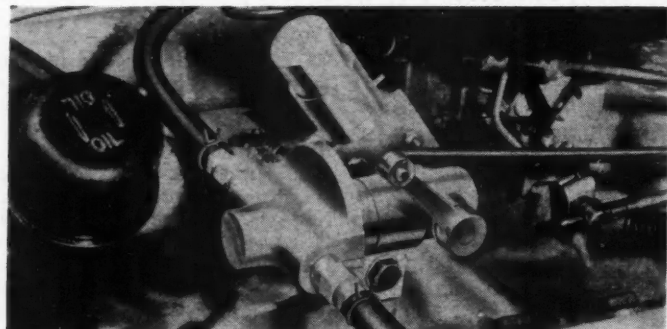
☐ Check here for information if you are under 17.

Then at Oklahoma City, Okla., before the AAA sprint-car race was one lap old, young Jerry Hoyt had hit the wall and been rushed off to the hospital in serious condition. An Indianapolis veteran at 26, Hoyt won the pole position for the '55

"500" and this achievement coupled with his consistent performances on dirt track had marked him as a man to watch. But Jerry Hoyt died in the hospital and auto mobile racing has lost one of its finest championship prospects.



Shown here storming along in a big 4.5 Ferrari is Carroll Shelby on his way to main event win in the 1st National SCCA Race at Torrey Pines, Calif. Texan Shelby covered the 40 laps (about 100 miles) at a 65.7-mph average to edge out Phil Hill



Here's the works of the Hemphill brake, a metering control valve about as big as your fist. Like other "power" brakes, it's operated by vacuum

As the clutch goes, so goes the brake

BACK IN THE '40s Americans slowly became accustomed to the vanishing clutch pedal. Now we have entered into the era of the huge brake pedal, but, believe it or not, that could be the next to go. Hemphill, Inc., has developed a new automatic brake that operates from the accelerator, making a brake pedal, as such, totally unnecessary.

The heart of the Hemphill system is a fist-sized metering control valve that mounts on the firewall of any car and operates from a vacuum takeoff. Along with this, an extra inch of travel is added to the accelerator. The accelerating portion of the travel remains the same. Of the extra portion the 1st 1/4-inch is a neutral zone in which the car coasts just as it would with a normal setup when you back off the accelerator. The final 3/4-inch is the braking zone, in which the brakes automatically go on, but unaided by you.

The principle is this: as soon as you ease up on the accelerator, as you normally would when about to stop, the braking action takes place and the car hauls to a smooth fast stop. The time it takes to move your foot from the accelerator to the brake pedal is eliminated,

and the manufacturers say that braking distances are reduced up to 60 per cent.

In addition, the system employs a Cruise Control, which lets you maintain steady highway speeds without pressing on the accelerator. When you reach a desired speed, you push a button which holds the accelerator in place. A slight pressure on the pedal engages this control. Or, in an emergency, tap on the horn ring releases the accelerator and simultaneously employs the automatic brake for a quick stop.

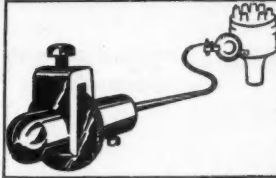
Once this system becomes familiar, it could be a great device for safety and car control. In sharp cornering, for example, you could slip into the braking zone momentarily and then press down for more power at the right time—all of this without ever moving your foot from the accelerator. Right now the automatic brake is in the accessory stage (it can be stalled on most cars in about an hour). It proves successful and popular, the brake pedal may join the clutch pedal as an increasingly rare relic of the past.

MT will report on how the brake works and our reaction to it in a future issue.

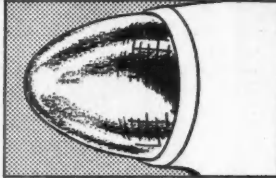
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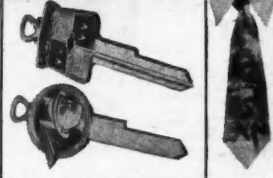
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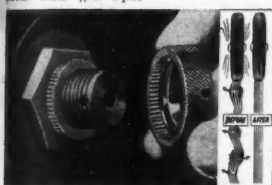
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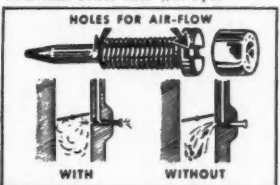
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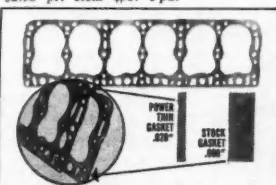
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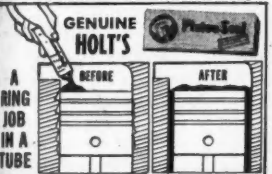
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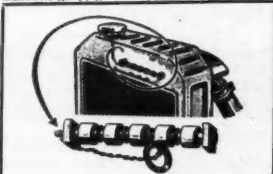
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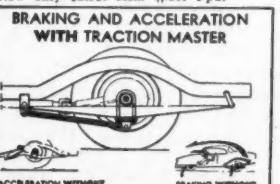
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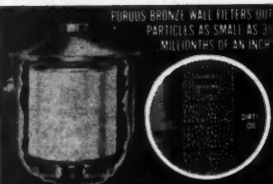
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TECHNICAL SERVICE

By the
**MT RESEARCH
STAFF**

Note: We are way behind in answering mail sent in to this column, but we are doing our best to catch up with it. Write your question on only one side of the paper to enable us to answer it on the reverse side. Along with it, send a self-addressed stamped envelope. We can answer only those inquiries limited to one specific question dealing with one particular subject or problem.—Editor

QUESTION—I have a '53 International pickup truck and I'm thinking of changing from the 4.1 rear axle to something that will still give lugging power for farm work as well as better fuel economy and higher cruising speed. Transmission is 4-speed. Because of backfire under sudden acceleration, it is impossible to hold the accelerator pump diaphragm over 2000 miles. I get about 12 mpg on the highway. Should I change the carburetor? What about higher compression? *Bill Miller, Kansas City, Mo.*

ANSWER—The 4.1 gears are considered satisfactory not only by International, but by most owners who use their 4-speed pickups for workhorse chores. You might get away with 3.9 gearing for more economy, but see your International dealer on this—he'd know more about availability and results in an axle ratio switch. Your backfire problem might stem from an intake manifold leak. Check the seal between head and manifold to make sure that the gasket is in good shape and that the whole unit is tightened evenly. If you must go to higher compression, mill the head, but be very careful not to mill too much. Start at .030 and go up in not over .010 increments, checking to see that you have plenty of valve clearance.

QUESTION—I have a '53 Lincoln. Would I be able to use the '54-'55 quad carburetor and manifold and approximately how much will it cost? *Ray Conover, Manteno, Ill.*

ANSWER—The manifold and carburetor will fit easily with only minor linkage changes. Prices vary but an average \$50 for the carburetor and \$10 to \$25 for the manifold should split the difference. If you have the work done add about \$16 for labor.

QUESTION—I would like to use the '41 Buick dual manifold on a '49 engine. I am mainly interested in the kind of carburetion I should use. Can I install Stromberg 97 units? *Pvt. Carl P. Cardey, Ft. Lawton, Wash.*

ANSWER—Don't use Ford 97 carburetors. The most successful adaptations of this originally unsuccessful manifold have been made using 2 carburetors of the same type as the original primary unit on the '41 manifold. These are linked together with solid linkage so that they operate together instead of progressively. The main trouble with the original installation, aside from the unbalance the progressive operation gave, was that the secondary unit had only idle and main jets with no power jet. Under "lugging" conditions, the sudden opening of the secondary unit dropped manifold velocity and leaned out the mixture. The results are well known. The remedy is to use 2 primary units as outlined above.

QUESTION—I would like to know if any of the Olds or Cadillac ('49-'51) engines can be installed in a Henry J. If not, what types of engines can be converted to a Henry J? *Terry Stephenson, Quantico, Va.*

ANSWER—The Cad has been adapted to the Henry J, but only for competition. It is much too heavy for the car to be used for the street. In this particular case the transmission used was a '37 Cadillac floor shift unit. You could try the Willys F-head 6 in your car. It should fit and, properly hopped up, would propel the Henry J like a jato unit.

QUESTION—I own a '30 Dodge without freewheel. I am interested in putting another transmission in it with greater acceleration and top speed. Could you please tell me what other transmission would be most suitable and what adaptations would be necessary? *M. B. Lewis, Jr., Minneapolis, Minn.*

ANSWER—No transmission change would give better top speed, since the highest gearing any standard transmission gives is direct drive, that is, a 1 to 1 ratio. Overdrive is out in your case since there is no room in the chassis for it. It looks like your Dodge will have to remain as the maker intended it unless you want to soup up the engine to some degree. (Continued on page 62)



"You been eating them health foods again?"

QUESTION—I own an Olds 88 with the 202-hp engine and Hydra-Matic. Could you advise me as to which of the 2 rear axles (Super 88 or 98) would result in hotter performance with no regard to economy? What more can I do other than major engine changes to increase acceleration and performance? *Gerald Wiedenmann, Tulsa, Okla.*

ANSWER—The 98 gear (same as 88 ratio with standard shift) is even lower than that of the Super 88 with H-M and would allow even more snap, but top speed would suffer slightly. You could probably get away with milling the heads by .050-inch for even better performance thru the added torque provided by increased compression. Your car should now have the 3.07 axle; Oldsmobile also has a 3.23 ratio, and a low, 3.64 axle may also be available. Check with your dealer.

QUESTION—I have a '55 Chevrolet V8 with overdrive. I would like to equip it with dual 4-barrel carbs. Is there a dual intake manifold available for this setup? *Jack King, Ft. Meyers, Fla.*

ANSWER—There is no equipment to take twin 4-barrel carburetion for the Chevy V8. Such a setup would cause tremendous overcarburetion and a net loss rather than a gain. At present the best equipment is put out in the factory power kit altho double and triple 2-throat manifolds will soon be available for this model.

QUESTION—My Ford Thunderbird has a lag during pickup. After I floor it the engine seems to feel its way along for a while until it gains speed. It has new points and the plugs have been cleaned and look good. What's the trouble?

ANSWER—The lag could be due to either of these 2 exactly opposite causes: Either the accelerator pump in the primary side of the carburetor is set too low, or is slipping pressure, allowing too great a drop in venturi velocity without enough fuel charge, or the exact opposite is occurring. In the latter case the mixture is rich enough to cause a choking effect. Try a different carburetor or have your present one carefully worked over. The total picture may also be a compound one in which a lag in distributor advance adds to the effect caused by faulty carburetion. Have the distributor checked on a stroboscope for proper advance characteristics. With an engine of this type any deviation from the ideal curve can be troublesome.

QUESTION—I have a '50 DeSoto 6 which I like but I'm not satisfied with its performance. Would it be much of a problem to install a new Fireflite engine in my car? Would it work with the fluid drive now in the car? *Gilbert Leonard, Beaver Falls, Pa.*

ANSWER—Chrysler products have a surprising degree of interchangeability and the change sounds like a good one. It would be best to get into a huddle with an open-minded DeSoto service manager who can give you all the right part numbers for the materials you'll need. With your car, unless you want to use a late automatic transmission, it would be best to use the '53 or earlier engine since the transmission and engine in these have separate oil systems.

QUESTION—Is there any American-made voltage regulator (generator, too, if necessary) I can use to replace the Lucas setup on my Mark VII Jaguar? Local auto electric shop won't touch Lucas equipment and I'm not well versed enough to adjust it myself. *J. L. Boyd, Craig AFB, Ala.*

ANSWER—You might try the new Delco-Remy regulators which are set up for 12-volt operation. If the regulator won't work with the Lucas generator, then a Delco generator is also indicated. They should both work with the Lucas system that is now in your Jaguar.

QUESTION—I own a '55 Mercury Monterey with the 188-hp engine and am planning to install a McCulloch supercharger. In what way will this increase performance and fuel mileage? *W. L. Jones, Smithfield, Va.*

ANSWER—You will get a definite increase in acceleration, particularly at cruising speeds. You will also get some increase in top speed, altho it won't be quite as noticeable. Gasoline economy should not suffer unless you do a lot of heavy-footed driving and go in for spotlight jumping.

QUESTION—I have a '54 Plymouth Suburban which seems a bit underpowered. Because of the compact size and nice handling qualities, I would like to keep the car if I can make a reasonable improvement in performance. A local dealer suggested the use of a Chrysler 6 which, he said, would go in with only minor modifications. Would it be practical as a replacement?

ANSWER—To this we can only say "amen." The Chrysler is definitely an excellent choice. The only modification will be the moving of

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12 Years and More!



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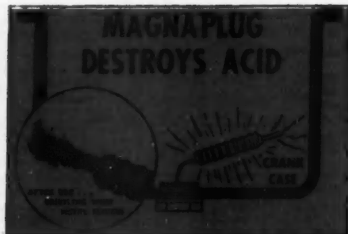
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PROVE TO YOURSELF! Before installing, run the magnet through a small pile of iron filings. Note how solidly they adhere. Now drop MAGNAPLUG into a glass of vinegar . . . watch the violent foaming reaction as it neutralizes the acid in the vinegar. THEN picture what happens to your engine *without* MAGNAPLUG!



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the radiator forward about 3 inches and the drilling of front mount holes the same distance ahead of the present ones. In some cases a small cutout must be made in the front crossmember to allow room for the vibration dampener. Everything else fits perfectly. If you want even more performance there is a complete line of simple bolt-on speed equipment available. Other than the age-old switch from Ford to Mercury, this is the easiest engine swap that there is and one of the least troublesome, servicewise.

QUESTION—I am thinking of putting a late model Ford V8 engine in my 1948 Studebaker. Would this be practical or advisable? *Robert Dupaski, Columbia Station, Ohio.*

ANSWER—You don't mention the type of Studebaker or whether it is a Commander or Champion. If it is the Commander of that

vintage you are out of luck. If it is the Champion, you still cannot swap engines with any degree of practicality but you do have a way out. There are no commercial adaptors for the pre-'53 Studebakers for any of the new engines. However, the Frank Morgan Co., 3rd and Eye Streets, Marysville, Calif., turns out speed equipment for the Champion that brings its liveliness up to its usual economy rating. Souping is not cheap but it is far less expensive than any attempt to swap engines in this particular model.

QUESTION—Each year we go to the West on our vacation and travel in the Rocky Mountains. Starting at about 6000 feet we experience a great deal of trouble from loss of power caused by "thinner" air. The car is a '51 Nash Ambassador and dealers all tell me the car runs too well to alter it when

I ask for smaller high-altitude jets. What to do? *Dr. W. J. Baker, Lake City, Fla.*
ANSWER—The dealers are right, within limits. The 6000-foot level is about 2000 feet above the point where the usual car gets into trouble. The need is not only for smaller jets but smaller venturis as well, a change which would cut top speed dangerously in your case. The mountain people have just learned to live with the situation, raising compression to the practical limit to make up for the loss. In your case the only practical answer would be the use of a supercharger. The only one which can be easily adapted to your car is the McCulloch which would pay off in performance dividends at home as well as in the hill country. You can also switch it from car to car.

QUESTION—I have a '54 Willys Eagle Custom with the 226 engine. I have already modified it to some extent and performance is quite good. I would like to install duals but the design of the manifold is such that splitting is not practical. Is there anyone who makes headers for this engine together with the necessary pipes? *Richard Vedder, Johnstown, N.Y.*

ANSWER—Most of the manufacturers of special systems will make up a set of headers for you on special order. Write to any one of the larger makers and tell your exact needs. The kit will be a bit more expensive than a ready-made set since the price will be based on time and material for that one job.

QUESTION—My '50 Olds 88 is beginning to suffer from a hard ride and has lost much of the smoothness it once had. A mechanic informed me that the shocks were still fairly good and that I needed new tires. Is this all? *Irvin Glen, Brooklyn, N.Y.*

ANSWER—It is just possible that the springs have settled, causing a faster rate and a consequently harder ride. The only thing to do in this case is to have leaf springs either re-arched or replaced. Sagged coils must be replaced since they cannot be re-formed as can leaf springs. This applies to any car.

QUESTION—I would like your opinion concerning a car that will be most practical on a rural newspaper route of some 125 miles per day. Would a pickup or passenger car be best? *Edwin C. Orr, Modesto, Calif.*

ANSWER—Because driving habits and conditions vary widely we cannot recommend one make over another for you, but you can get a good idea of relative economy from averaging the results of MT's road tests for the past several years. Rather than either a pickup or standard passenger car, you might look into the possibility of using one of the several wagons available (see August MT). These have proven very successful for the use you outline and can be utilized at other times for passenger use.

QUESTION—In the July issue, you refer to the Economy-Run-winning Roadmaster. Did you ever print the results of the entire contest? *Amos S. Hebble, Orange, N.J.*

ANSWER—Yes, in May. Other class winners were: Rambler, Studebaker Commander (sweepstakes winner), Nash Ambassador 6.

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Ever wonder why your car "snake-tracks" . . . why your tires wear rapidly and unevenly, even when your wheels are in balance? These things happen because you can't compromise with ordinary front wheel spindle nuts! Tighten one down and it's like spinning a wheel of fortune. Maybe the cotter-pin hole in the nut will stop opposite the spindle hole. But the chances are 10 to 1 that the holes won't align. Then, you either further-tighten the nut and risk fracturing a bearing; or, you back-off the nut to permit insertion of the cotter pin. The resultant "play" is multiplied 43 times from bearing to tire tread . . . causes front end wobble and short tire life . . . raises hob with bearings, causes costly repairs. This problem doesn't exist with just some cars. All cars, even the newest, need this remarkable new invention!

HOW MICRO-LOK NUTS PROVIDE THE SOLUTION . . .

Unlike an ordinary castellated spindle nut which provides only 6 settings, MICRO-LOK Nut affords over 1000! Its Micrometric head has 62 separate serrations, permitting absolute accuracy! After tightening nut to exact degree required, you simply slip the "Micro-Lok Cap" over spindle to align Cotter-pin holes perfectly . . . no backing-up, no compromise! You benefit from better, more controlled steering, longer bearing, brake, and brakelining life! In addition, being precision machined of roughest carbon steel, they are fully 100% safer than old style nuts!

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Easier to install than conventional spindle nuts. Simply remove grease caps, unscrew regular nuts, and replace with MICRO-LOK Assembly. It's easy!

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The average tire can side-slip as much as 55 ft. every mile . . . or about one mile in every 100? No wonder tires wear out so quickly, and straight line steering becomes so difficult! Significantly, Bob Sweikert, this year's winner of the Indianapolis "500," used Micro-Nuts on his car.

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How can car A be going slower than car B when both get to the end of the drag strip at the same time? John Christy tells the problems of

TIME

ONE OF THE MOST puzzling aspects of MT's road tests arises when one car turns 75 miles an hour thru the standing ¼-mile in 19 seconds while another crosses the line traveling 70 mph but takes only 18 seconds to do it.

It's a ticklish problem, and one that isn't limited to MT's test cars. Here's a case that recently puzzled Sunday afternoon dragsters. A car consistently hit 144 mph thru a trap at the end of a Southern California strip with an elapsed time of 11 seconds thru the ¼-mile. Another car, which had been turning only 130, clipped the elapsed time of 9.8 seconds! What's the answer?

Basically, it's a problem in constant acceleration. The slower car in each instance accelerated very rapidly at first and then "peaked out" or reached a point approaching terminal velocity very early in the run.

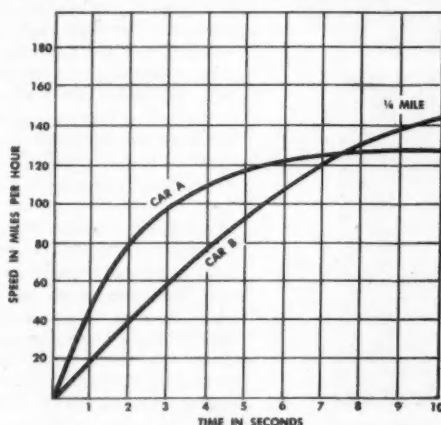
The faster car, *i.e.*, the one which turned the fastest top speeds, took more time getting under way but generally was still accelerating at the end of the strip.

Behind this explanation lies engine torque and the period when torque is operative, and at what rate it is put to work. A steam engine or turbine simplifies the problem. Peak torque in either of these is developed at stall and diminishes from that point. With the gasoline reciprocating engine, however, the problem is a bit different since peak torque occurs somewhere in the 2000- to 4000-rpm range. Short of this point, output is greatly diminished.

For explanation purposes, torque is the value of the twisting force exerted and horsepower is the measurement of the rate at which it is applied. How much and how fast or at what speed this twisting force is applied makes a big difference in the

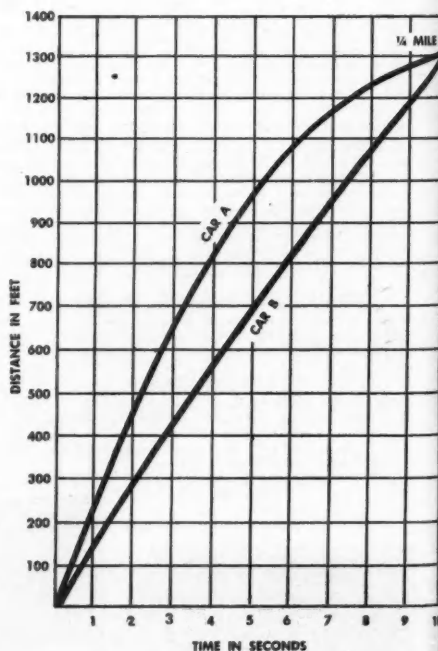
performance of the engine and the car in which it is placed. A big early-model engine will produce huge amounts of torque but at a relatively low rate of speed or rpm. In this case the initial thrust is enormous; however, over ¼-mile, the low rate of speed at which this thrust is applied will rapidly kill the acceleration. Conversely, a small or modern engine producing less torque but at a higher rate of speed will continue to accelerate over the whole distance.

Another example would be the case of 2 midget race cars, one equipped with a Meyer-Drake engine, the other with a souped Ford V8 60. Both have roughly the same horsepower—about 125. Both have about the same usable peak rpm. Peak torque of the Meyer-Drake is reached at a slightly lower rpm than the peak of the 60. Further, the shape of the torque curve



Graph illustrates how 2 competition cars which have equal times of 10 seconds thru the ¼-mile can have different speeds at end of strip. Car A has more acceleration at start but peaks off early. Car B gets off the line slower but is still accelerating at the end of the ¼-mile distance

The same 2 cars, showing how car A moves a greater number of feet per second early in the run but peaks off at about 8.5 seconds. Pattern for car B is almost straight, without peaks. At any point short of ¼-mile, car A leads, but car B leads at the 10 second, ¼-mile point



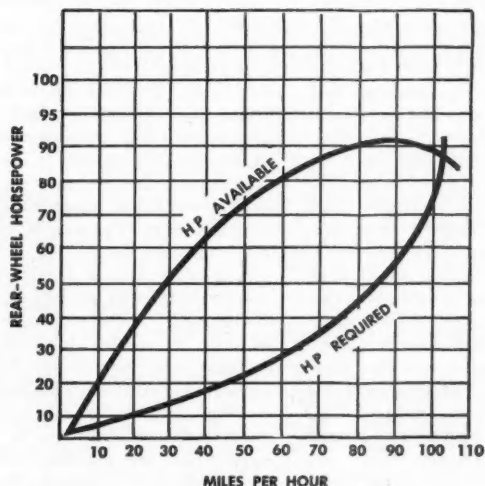
VS. SPEED

as plotted on a graph is more rounded (i.e., held over a greater period) while that of the 60 is quite sharp and falls off rapidly. Taken over a 1/4-mile strip, both will, if properly geared, reach about the same speed at the end of the line. The elapsed time of the Offy, though, will be considerably less than the 60. Conversely, if the 60 is geared so that its elapsed time is similar to that of the Offy, top speed will suffer seriously.

From this you can see that gear ratios have a lot to do with the problem. Gearing is the answer to the inability of the reciprocating engine to produce power or torque at stall or at low speeds. The average passenger car engine in the past had a peak torque occurring at about 1800 to 2000 rpm and a power peak developed at about 3600 rpm. Recently these values have gone up to about 2400 and 4200

respectively. At idle speeds, these engines have almost no ability to produce power or torque. In order to get rolling, then, there must be some way to multiply the available torque and let the engine reach a speed at which enough power is available to move the car. An attempt to get a car rolling from a standstill using only high gear illustrates this point. Thru progressive gearing, the engine is allowed to speed up to torque-producing rpm even at low car speed. As the speed of the car increases, the gearing requirement is less, and a shift to the next higher gear can be made. This continues until the car speed is such that either direct drive or an over-drive is suitable.

The more evenly spaced and the closer together these gear ratios are (within limits) the closer matched will be the torque requirements of the vehicle and the



Typical curve showing horsepower available and horsepower required to move a typical light car. Point at which 2 curves meet is peak speed of car. Widest vertical point in enclosed area is the point of maximum acceleration in the highest gear

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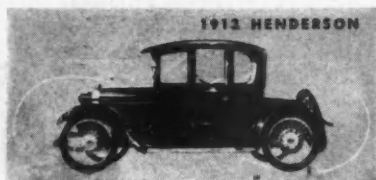
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actual ratios of the gearbox. This partially explains why a fairly low-powered sports car can compare in many instances with a much larger and more powerful car. It also explains why a good man with a "stick shift" can often beat a man with an automatic box, their cars being otherwise equal. The automatic has, in some cases, a built-in lag between shifts, as well as a lag in torque buildup in the transmission. The time between gear engagements, automatic or manual, is, of course, a point of no power.

The difference between power required and power available is the measurement of the acceleration abilities of the given vehicle. The greater the spread between the 2, the more acceleration the vehicle has. The "power required" curve, plotted on a graph, is the reverse of the shape of the "power available" curve and starts out quite slowly, rising rapidly toward the vertical. Eventually, no matter how light and streamlined the car or how powerful the engine, the 2 curves will meet. The point at which they meet is the point at which the car ceases accelerating.

By switching gear ratios around, the road-horsepower available can be increased to produce a greater spread over the power curve required. However, by lowering the gear ratio the engine must turn over faster to produce a given amount of speed. The faster it turns, the quicker it reaches its power peak, and it starts downward toward the rising power required curve. Detroit has designed a balance between a gearing that will produce the ultimate top speed of the car and one which will provide maximum acceleration. Where this balance lies is up to the production engineering staff. Some lean toward low-speed acceleration, others lean toward high-speed acceleration. Here again we see why one car will have a relatively low top speed and short elapsed time while another will have a high speed and a longer elapsed time over the same distance.

Slippage in automatic transmissions can be considerable under conditions of rapid acceleration, consequently the engine winds up to peak without producing a noticeable effect at the rear wheels. This same effect, however, allows the use of a higher final-drive gearing. Early-day torque converters with little or no mechanical torque multiplication in the transmission produced killing effects on acceleration, altho top speed suffered little if at all. But, successive gear ratios, direct-drive lockups, multiple stator sections, and, more recently, variable pitch blades in the torque converter have made automatics tough customers in the standing-start drag race.

Here's an example of what can be done with torque multiplication in excess of that provided by the torque converter in the transmission. A driver with a late-model car equipped with a torque converter type of automatic had been going out to the strip for several weeks, each time bettering his top speed slightly thru

engine tuning. However, he shortened his elapsed time not at all. Finally he showed up with a set of smaller-diameter tires mounted on the rear of the car, reversing the usual practice. His top speed dropped by about one mile an hour but his elapsed time was *shortened by a full second!* The difference was so startling that he was accused of modifying the car. However, the answer was quite simple; the smaller tires merely let the engine wind up to peak quicker thru the "gearing down" effect of the smaller wheel circumference. Even tho he was all through accelerating at the end of the strip, his initial jump off at the starting line was fast enough to shorten his elapsed time considerably.

A final facet of acceleration is that of gross vehicle weight—the weight of the car and its payload combined. The lighter the car and its load, the easier it is to push off the mark since the engine has less inertia to overcome. The higher the power and the lower the weight, the greater the spread between the power required and the power available.

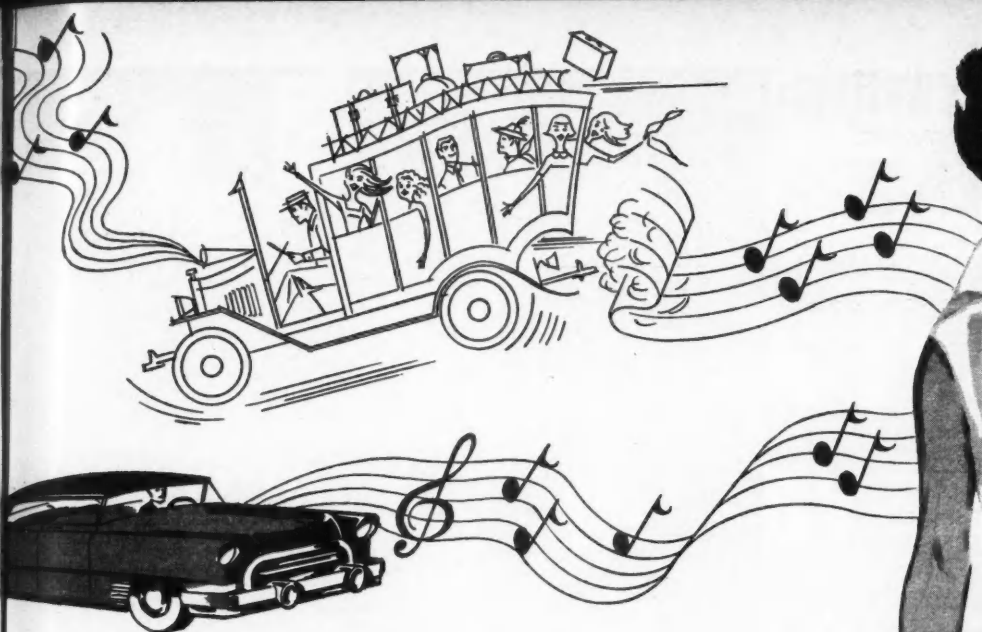
Summing up, then, the factors governing the acceleration pattern of any vehicle, be it race car, tractor or passenger car, are the torque available, the gross weight of the car, and the engine speed at which the torque is put to use or horsepower. The pattern can be varied by juggling any of these factors; available torque can be increased by torque multiplication devices such as gearing, smaller wheels and torque converters. The weight of the car can be pared down or the output of the engine increased, lowering the numerical value of the power-to-weight ratio.

In stock cars, at least in the latest models, it is apparent that manufacturers are varying the point at which power available and power applied (see graph) are at their widest. Gearing is all-important, for economy is still an excellent sales pitch. In any case, the resultant spread between cars is slight, but there is a definite and measurable difference. It is this difference which makes for the puzzling pattern of acceleration factors among MT's test cars, regardless of their general price range and class category.

A careful study of the intermediate acceleration times of all cars tested as well as the final 1/4-mile time and speed will show up the pattern. It is in these intermediate speed and time tests that the difference between the quick-take-off, early-peaking car and the one with the long, steady pull will show up. In short, both elapsed time and top speed at the end of the 1/4-mile are important. Top speed is the measure of potential, while elapsed time is the measure of stoplight acceleration force.

next month

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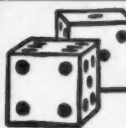
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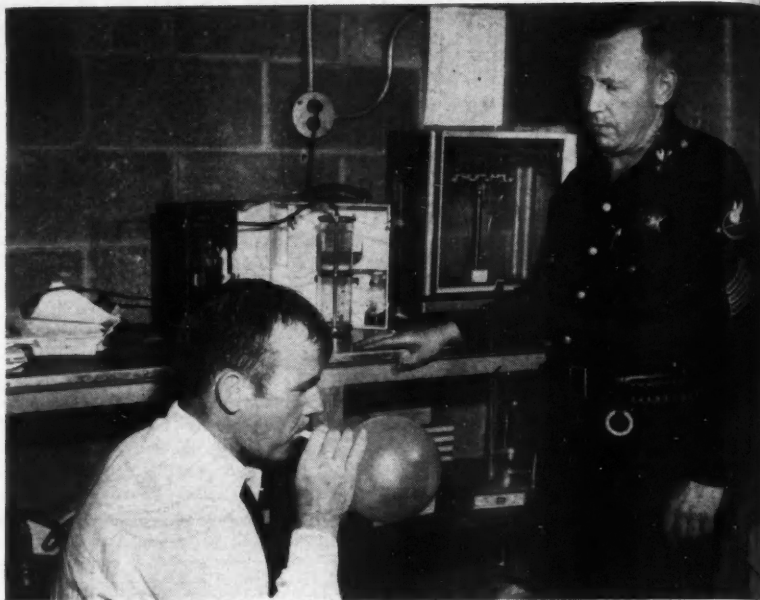
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WITNESS FOR THE DEFENSE

by Ross A. Brown

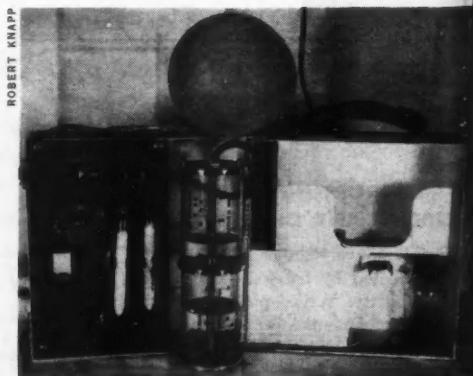
REGARDLESS OF HOW MUCH he's been drinking, the motorist who's hauled into the station on a drunk-driving charge has always had "only a couple of beers." Be it 2 beers or 10, most police departments now have a way to find out for sure—with the much-discussed Drunkometer. Slowly being recognized as an impartial, accurate device that exonerates just about as many people as it convicts, the Drunkometer could be the best defense witness in a drunk-driving case.

The Drunkometer, invented by Indiana University biochemist Dr. R. N. Harger, is a simple setup. Here's how it works. A balloon blown up by the suspect is attached to a tube which carries the breath to the various chemical vials on the test panel. After passing thru the chemicals, the "treated breath" enters a large jar, where it displaces varying amounts of water. Graduations on the jar then show the percentage of blood-alcohol. A double check is made by weighing the ascarite tube on the panel. This tube has trapped carbon dioxide, and its weight also indicates alcohol percentage. In most states where the Drunkometer's telltale results are recognized by authorities, a reading of more than 0.15 per cent alcohol in the blood means intoxication.

We'll flatly assume that MOTOR TREND's readers are too intelligent to drive when intoxicated.

To you then, the Drunkometer has only advantages to offer. Suppose you *have* had only a couple of beers, but your breath still smells like you've had a dozen; the police probably won't believe you (and they shouldn't) but the Drunkometer will show that you're telling the truth.

Symptoms of shock, cerebral hemorrhage, heart attack, and other injuries and sicknesses often look like drunkenness to the average person or even to a trained police officer. In such cases the Drunkometer will tell the police to rush the suspect to a hospital rather than a jail. So the Drunkometer is just as much for your protection as trial by jury.



Harger Drunkometer unit is small and portable offers double check on blood-alcohol percentage



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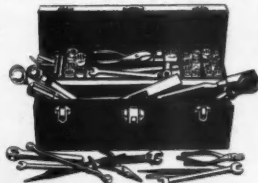
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A Prediction Comes True

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About the Revival of the Electric Car?

YOU'VE SEEN many meaningful experimental machines in the pages of MOTOR TREND: Chrysler's gas turbine Plymouth, Britain's Rover turbine car, Fiat's efforts along these lines, and others.

But here's one that strikes a little closer to home, and it's going on sale.

Built by the Electronic Motor Car Corp. of Salt Lake City, Utah, the Electronic is a deluxe sports car (now a roadster, soon to be offered as a 5-passenger coupe)—110-inch wheelbase, 1-piece Fiberglas body. But it's what you can't see that makes it exciting.

Currently designated "turbo-electric" because its 80-cell battery system is regenerated by a small gas- or diesel-powered turbo-generator, the Electronic's prime power comes from a "dual-torque" electric motor within a rear-axle housing incorporating an "electromagnetic" differential (of limited-slip type) and "dynamatic" braking all in a single unit.

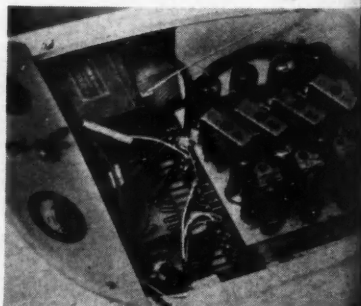
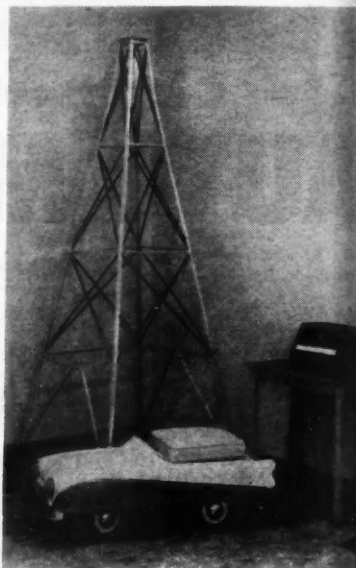
Regeneration within the differential allows the motor to pick up energy as you coast down a hill—thus saving fuel. The dynamatic braking feature converts the drive motor into an auxiliary brake in conjunction with a conventional brake system.

We said above that the Electronic is now called a turbo-electric vehicle. That's subject to change (possibly within 2 years), for the "turbo" part is to be replaced by a radical system of transmitted power.

Transmitting towers will send power to an energy receiver which will convert the power into battery-recharging current (as a radio receives and amplifies a station's signal and feeds it to a speaker).

An electronic "brain" (an integrator or actuator now in use with the turbo-generator) apportions the energy when needed. J. J. Barton, company spokesman, hinted that the transmitted power would cost "even less than is now paid [for electricity] in the home."

This preview will prep you for a forthcoming full-scale feature.



Working-model car illustrates principle of transmitted power. Underhood shows receiver to regenerate battery.

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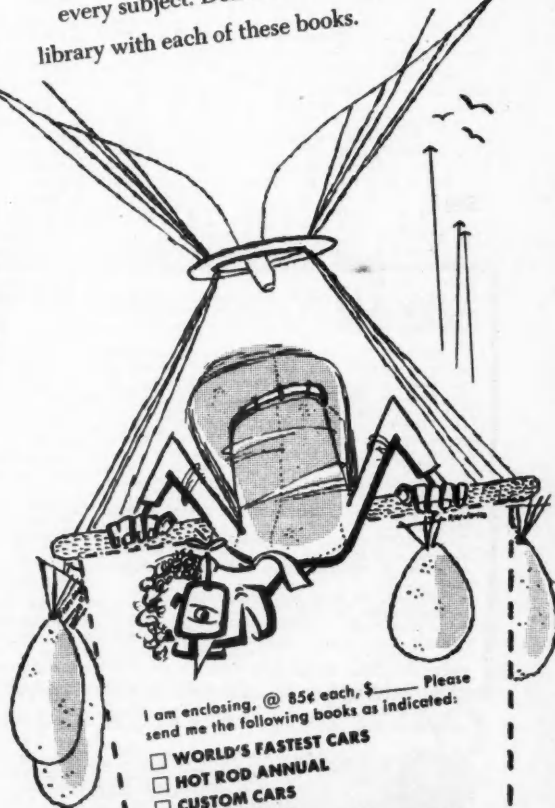
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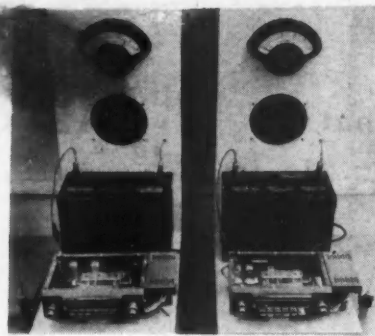
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continued from page 34

New Mood in Mobile Music: Changes from Detroit

IN CERTAIN MODELS of its '56 line, Chrysler will offer a revolutionary transistor-type car radio. No warmup period is necessary in these sets which replace conventional radio tubes with tiny transistors wherever possible. Current demand on your electrical system is 90 per cent less than with the standard tube-type radio. The transistor radio allows 140 hours of continuous operation on a 12-volt

battery; conventional sets perform about 10 hours before battery recharge is necessary, as everyone knows who left his turned on overnight.

Transistor sets can be made into compact units and styled to fit into smallest recesses, which may result in larger glove compartments or perhaps built-in dashboard air conditioners in not-too-distant future.

SELL 'N' SWAP

Requirements are: copy limits of 25 words (not including name and address); first come, first served; we reserve the right to edit where necessary; we are not responsible for accuracy of description, although we will reject any misleading statements. This service is not open to commercial advertisers. No ads will be accepted if payment is not made in advance and such communications will not be acknowledged. Only one CAR may be listed in any single Sell 'N' Swap insertion. This limitation will not apply to parts, catalogs, etc. The charge is four dollars per insertion. If your car is unusual and you have a photo of it suitable for publication, you may submit it with your ad. If we decide to print it there's no cost to you for the cut, but we'll have to decide which photos to use. Sorry, no photos can be returned.—Editor

SELL

'28 AUBURN boat-tail speedster. Very good condition. Extremely rare car. Pics on request. Best offer takes it. Thomas F. Toward, 20 W. Grand Ave., Lower City, Pa.

'36 LINCOLN K V-12. 27,000 actual miles. Orig. paint, sidemounts, w.w.s., aluminum body. Perfect cond. Best offer takes. Robert De Freez, R.R. 1, Gallen, Mich.

AUTORAMA souvenir program. Popular demand reprint, collector's item. Over 100 pics and stories, cars featured at great enthusiasts' production. \$1 cash or money order. Joe Kizis, 215 Broad St., Milford, Conn. Dept. M.

'48 LINCOLN CONTINENTAL hardtop, V-12. Exc. body, new uph., runs good. Has r & b. o.d. \$1250 or trade. Ken Hill, Overhill Park, N.Y.

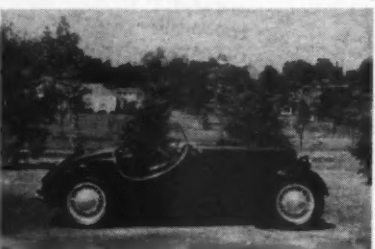
'53 FORD Country Sed. Like new, full power equipped, Granco-built 220-hp engine. 6000 miles, tachometer, air horns, 2 spotlights, w.w.s., \$1975. G. E. Elsner, 465 Western Ave., Benton Harbor, Mich.

'13 FORD T rdstr., orig., brass radiator, in good running cond. Easily restorable. Best offer over \$950. No trades. A. W. Fogelstrom, 960 W. 5th, Eugene, Ore.

'27 FRANKLIN 4-dr. sed. Mechanical brakes, '55 registration, can be driven anywhere. 6-ply tires, 2nd owner. Best offer accepted. Joseph Sosinski, 360 Fairfield Ave., Hartford, Conn.

'28 FRANKLIN victoria brougham. Hydraulic brakes, '55 registration, 6-ply tires, can be driven anywhere. Orig. owner. Best offer accepted. Joseph Sosinski, 360 Fairfield Ave., Hartford, Conn.

'38 DKW (Auto-Union) 2-cyl., 648 cc, aluminum-body rdstr. Rare FS-700 type. Needs some work, fac-



tory manual included. Best offer over \$200. Linc Evelyth, 15 Vernafeld Rd., Fairfield, Conn.
'28 FORD Model A rdstr., completely disassembled, professionally restored. Only driven 85 miles since. Beautiful collector's item. Will sacrifice for quick sale. \$495. Joan Groner, 8514 White Ave., St. Louis, Mo.

'25 WILLYS-KNIGHT 3-dr. sed. Good mech. and body cond. Orig. owner. Highest offer over \$100 f.o.b. Harrie Grey, 1730 30th St., San Diego, Calif.
'31 FORD Deluxe Fordor town sed., in showroom cond. One of the most beautiful in America. Sell or trade for a beat-up 810 Cord. Howard C. Bergstrom, 1717 S. 29th St., Omaha, Neb.

'29 PACKARD phaeton, pearl gray, leather uph., 1-shot grease system, compressor. Orig. owners' manual, 38,000 miles. Exc. classic, no work. Best offer over \$800. Richard Hope, 9-01 127th St., College Point, N.Y.

CHASSIS and body parts catalogs, owners' manuals, shop manuals, dealers' books on postwar Lincoln Continental. John J. Gubelman, 120 E. 87th St., New York.

AUSTIN A-90, engine same as in Healey, conv. Low mileage. Nearest offer to \$895. C. Austin, 3949 Puritan, Detroit, UN 1-0330 eves and Sundays.

'34 REO ROYALE 4-dr. sed. Self-shifter trans. Orig. black enamel finish. Basically sound and complete, licensed and running. \$125. R. M. Heaney, 1600 Fair Oaks Ave., S. Pasadena, Calif. PYramid 1-2016.

'42 BUICK Limited Series 90 8-pass. sed. Factory conversion to '48 Roadmaster engine and Dynaflow. Originally used by Buick executives. Good cond. Best offer. James Walrath, 88 Chestnut St., Copperstown, N.Y.

'52 DAIMLER sports conv., automatic chassis lubrication, fluid drive, 4-band r & h. Fine, luxurious automobile in exc. cond. \$1200 or best offer. James B. Laughlin, Drake's Corner Rd., Princeton, N.J.

'46 LINCOLN CONTINENTAL. Black, orig. mileage 26,000, showroom cond., new w.w.s. \$2600. Must be seen to be appreciated. W. Stanek, 351/2 Walker St., Manchester, Conn.

'30 CHEVROLET sed., 35,400 actual miles. Built-out trunk, car in exc. cond., tires good, engine oiled, orig. paint. \$325 or best offer. E. Waddell, Box 2, Charles City, Iowa.

'47 LINCOLN CONTINENTAL hardtop, maroon and tan, 8000 miles on new '53 Olds engine, o.d. Power brakes, new uph., very clean thruout. Best offer over \$1750. Guy Martin, 11 Dorset Rd., St. Paul, Minn.

'36 CORD 810 sed. Mech. rebuilt by top automotive engineer. Owner deceased. Paint, chrome, and uph. to finish. Has continental wheel mount and large rear window for safety. Mrs. Walter Chandler, 1915 Riverside Dr., South Bend, Ind.

LINCOLN LeBaron custom conv. Racy old gentleman needs much love and work. \$165. Parts: Lincoln (KA engine, etc.), Cadillac, Henry J., Nash-Healey (engine, etc.), Overland, James Yule, 6805 Dunbar Rd., Baltimore, Md.

'26 CHRYSLER 4-dr. Unrestored, in storage, last time registered '32. Exc. running cond., no dents. 28,000 miles, one owner. \$450. K. Lindsey, 1018 Glen Brook, San Jose, Calif.

'40 LASALLE 4-dr. sed., black, recent complete engine, rear end, clutch and radiator o'hauled (cost \$500). Good tires, one new. Mrs. Ruth E. McGee, 400 E. 4th St., Dayton 2, Ohio.

'14 DODGE touring, runs well, no rust. New paint, good tires. Needs new tubes. Runs on magneto. Orig. generator included. Moving to Calif. Best offer. Thos. Gurney, 184 N. Hewlett Ave., Merrick, L.I., N.Y.

'12 PACKARD 6-cyl. No body rust or damage. Always stored in garage. Good running cond., electric starter, needs uph. \$2500. Pics 50c. A. E. Twoby, 400 N. Kenmore Ave., Los Angeles.

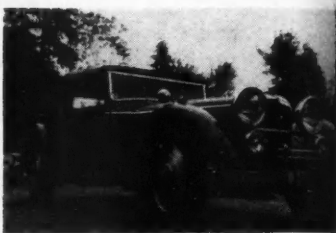
'38 PACKARD 12 conv. cpe. Beautiful, orig. Full page Sept. '53 MT, True Magazine No. 2, '53. New w.w.s. Full red leather, perfect. 43,000 miles. \$1850. Albert J. Dunkel, 19147 Chase St., Northridge, Calif.

'41 CADILLAC phaeton. Orig. superb cond., 69,000 miles. Exceptional automobile, completely equipped, unconditionally guaranteed. Available only due to military transfer. \$850 for immediate sale. Lt. McGinty, Naval Air Station, Pauxent River, Md.

'31 CADILLAC V-12, 7-pass. touring car in exc. cond. Floorboard body. Best offer. Robert Budway, 689 Main St., Bangor, Me.

'30 CADILLAC V8 sed. In orig. and exc. cond. thruout. Only 40,000 miles. Very little restoring would be required to put in showroom cond. J. T.

Buckingham, 840 Detroit Ave., Concord, Calif.
'31 MODEL A Ford conv. cpe. Briggs roll-wind model. Body, trim and interior restored like with rebuilt engine. \$625 or best offer. Williams, Phillips, 709 St. James St., Pittsburgh, Pa.
ALVIS Speed 20 5-seat drophead. Fine cond., in jacks. Centerlock wire wheels. Air-cushion



uph., 4-speed all-synchromesh gearbox. \$1250. Creighton, 559 Hamilton Dr., Cove Cliff P.O., Canada.

'46 LINCOLN CONTINENTAL conv. Silver lacquer, w.w.s., black tucked uph., wine bead carpet. Exc. cond. \$1400 or will trade for new. Free pics. Alvin B. Scroggin, 103 Baptist Dallas, Tex.

DUAL intake manifold for Kaiser or Frazer '44 with numerous odds and ends. \$55. Maj. M. Wells, 7B Hatchee Rd., Eglin AFB, Fla.

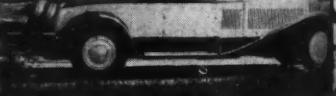
'55 HUMPHREY 4-dr. sed., 6-cyl. Runs very nice rings. 33,000 orig. miles. Orig. paint, perfect. \$500 or best offer. M. C. Benischke, 5th Ave. S.E., Cedar Rapids, Iowa.

'35 BREWSTER 7-pass. custom limousine. Open closed chauffeur canopy. Aluminum body, wheels, new '48 V8 engine. Tires and hub. Trophy winner, immaculate. \$995. Jim Baker, Forest Court, Louisville, Ky.

'13 BUICK, exc. mech. cond. Incomplete restoration. \$1200. Kenton H. Kimm, 2425 N. Broadway, Ind.

'24 DODGE sport rdstr. Perfect running cond., tires, clean and orig. thruout. Make offer. Box 1, Lemon Grove, Calif.

'34 ISOTTA-FRASCINI conv. cpe. Customized Castagna, designed in '25 for Rudolph Valentino.



185-hp, 8-liter engine. Orig. cost \$38,000, \$3500. Francis Manna, 411 Burritt Ave., Storrs, Conn.

'29 CADILLAC V8 Fleetwood town car, 28 miles. Purchased from museum. Engine, tires, uph., top, orig. and exc. Can drive anywhere. Winner. Reasonable. William L. Wilsey, 1529 St., Rockford, Ill.

'37 LINCOLN V-12 model K. 7-pass. sed. Orig. thruout. Dark blue finish, perfect interior. 48,000 miles. Mech. sound. \$375. C. Smith, 605 Quail Ave., Altoona, Pa.

'26 PIERCE-ARROW Series 80 rdstr. Aluminum body, engine, tires, body good. Needs paint and top. Complete in every detail. \$545. Ronald T. R.D. 1, Box 78, Sharon Springs, N.Y.

'37 BUICK Roadmaster conv. sed. 6 wheels, mounts. Orig. leather interior. Exc. body, light brown finish, good top and tires. Mech. exc. \$500. R. Linz, 843 N.W. 27th Ave., Fla.

JETMOBILE, custom 3-wheeled show car. Jetmatic, modified V8 60. Consistent prize winner.

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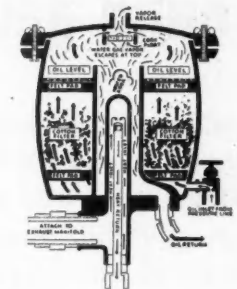
WANTED
RE-25 STUTZ regardless of condition or model.
reward for lead if such information results in
purchase by me. F. Edwards, 839 Marsh Rd.,
Anso Park, Calif.
OR RESTORATION of '38 SS-100: frame and
end suspension, front fenders, chrome radiator
ail, transmission, rear wheel bearings, horn, head-
light, mounting, and chrome struts. Richard T.
Benson, P.O. Box 555, West Chester, Pa.
GRAHAM-PAIGE 4-speed trans., Wills-Steele
Club cars or parts, '31 Willys-Knight rdstr., '24 or
'25 Hupmobile rdstr. H. Probert, 250 Magnolia
Ave., Larkspur, Calif.
HUPMOBILE SKYLARK left front and left rear
fenders. Please state price and condition. W. E. Long,
121 Goode St., Montgomery, Ala.
LOCOMOBILE, any model, passenger or truck.
Chassis can be restorable. F. C. Dabney, Jr., Box 151,
Larkspur, Ga.
OR '812 CORD in restorable cond. or leads
within 300 miles. Seat model, condition, and price
to letter. No junk or fancy prices. R. E. Neal, 2734
Battler St., South Bend, Ind.
PACKARD Darrin or any automobile built by
Packard. Prefer in restored cond. but will consider
any cond. Pics returned. Please give full details.
Frank Murlowski, 2109 6th St., N.E., Minneapolis,
Minn.

Stop Needless Oil Changes!

REFINOL

Today's Most Advanced OIL REFINING FILTER Ends Needless Waste!

Amazing REFINOL not only cleans, but actually REFINES MOTOR OIL AS YOU DRIVE! Refining action that keeps oil in high grade lubricating condition at all times, is made possible by use of motor heat. REFINOL acts as a "filter," to remove solid impurities—also eliminates water through "distillation," and prevents excess fuel dilution. This means you save not only on oil, but in added engine life and greatly reduced tune-up bills! REFINOL prevents formation of sludge and dangerous acids, two of the chief causes of engine deterioration.



With REFINOL installed—you can even use CRANKCASE DRAININGS! Never change oil! REFINOL is sold with an iron-clad, money-back, WRITTEN GUARANTEE!

FITS ANY CAR, TRUCK, TRACTOR

REFINOL is easily installed on any automotive engine. Units may be transferred from one engine to another, if desired. Cleaning and refining action of REFINOL is immediately effective.

SEND FOR FREE FACTS TODAY!

A postcard will bring you vital, free information. Details of REFINOL: pictures of installations; facts about motor oil; how airlines, buslines, other big oil users save thousands of dollars by observing the simple fact that OIL DOES NOT "WEAR OUT" MECHANICALLY! Rush your name today, for your free copy!

INTERNATIONAL REFINOL CO.

Dept. M-9 9242 BROADWAY BROOKFIELD, ILLINOIS

Bulletin 86, U.S. Bureau of Standards, says: "OIL DOES NOT WEAR OUT MECHANICALLY."

REFINOL is based on this scientific fact. Since oil does not "wear out," why change it? REFINOL keeps oil sweet and clean, maintains stable viscosity through constant cleaning and REFINING ACTION, as you drive!

YOU'LL ENJOY BETTER PERFORMANCE

with



MUFFLERS DUALS HEADERS QUALITY — TESTED AND ACCEPTED

Now SPORTSMAN, the original . . . and most imitated Fiberglass packed muffler, is complemented by the most complete line of dual sets . . . each set designed for easier installation, with proper clearance at all points. Veteran Haviland exhaust system engineers have designed each dual set to give the low back pressure which is so important for the best performance. Ask your dealer what SPORTSMAN exhaust system parts can do for you.

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A GREAT INNOVATION

for



Custom RIDE CONTROL!

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are the shox for you. Three easy adjustments give you a soft, normal or firm ride—in other words, a quick click and you have the type ride of your particular choice. Your dealer knows "AjustOmatic" and also "Gabriel", the greatest name in ride control. See him or write—

The GABRIEL Company • Cleveland 15, Ohio



Here's How Millions of Road Test Miles PROVE You Can Keep Your Car's Engine Young and Powerful

Now, by popular demand Magna-Power includes a powerful Alnico magnet to remove stray iron and sheet particles from your oil. Magna-Power's double protective action now combats (1) powerful corrosive acids and (2) engine damaging magnetic abrasives.

A report on 15 years of research which shows that Acid Erosion is the greatest cause of wear and loss of power in car engines . . . and how to stop Acid Erosion by a method so simple it's hard to believe.

YOUR ENGINE'S GREATEST ENEMY IS ACID

Acid formed as a result of combustion inside your engine causes:

- A. Erosion, pitting, scarring of engine surfaces.
- B. Gritty by-products of acid erosion which are themselves abrasive and tear at engine's surfaces. (By-products such as iron oxide or aluminum sulphate result from chemical action on metal.)
- C. Varnish, resins, gums and sludges in oil; causing deposits on engine surfaces, valves, rings and plugs.
- D. Power loss because of excess blow-by gases, corroded spark plugs, sticking valves and rings—all caused by corrosive acids.

WHEN ACIDS ARE STOPPED . . .

- A. **ENGINE WEAR ALMOST ZERO!** Tests show "wear" reduced over 80% after break-in. Engine life expectancy up to 200,000 miles.
- B. **CLEANER OIL WITH LONGER FILTER LIFE.** Less sludge and varnish to clog the engine, block the filter.
- C. **MORE POWER.** With reduced "wear," engine parts polish themselves to a mirror-like finish with close fit and tolerance. Wasteful blow-by gases reduced to minimum.

D. **SMOOTHER RUNNING.** With deposits and gumming reduced, spark plugs fire smoothly, consistently; valves lose "stickiness."

E. **SAVES MONEY!** Better gas mileage, with full power; less oil consumption with fewer changes needed; longer filter life; better, smoother combustion; lower maintenance costs, all add up to money saved while getting improved performance.

Laboratory and road tests alike have proven the Magna-Power acid neutralizer is the best method of combatting corrosive engine acids.

HOW ENGINEER'S DISCOVERY LED TO THEORY

Back in 1940, while doing research on experimental diesel aircraft engines, an engineer named Winthrop Johns made a puzzling discovery. He noted there was less evidence of engine wear and oil breakdown at high temperatures than at normal low operating temperatures. In checking his data he observed that the critical point of about 190° was approximately the dew-point of water in the engine. But water itself has little power to harm engine metals or to affect lube oil. However, Win concluded, small quantities of condensed water must be reacting with the waste products of combustion in the cylinders to form corrosive acids. Waste gases like carbon dioxide or sulphur trioxide, for example, join with water to form corrosive Carbonic Acid and Sulphuric Acid. Theoretically, these acids would have a 3-way action: 1) the acids attack engine metals. 2) The acids break-down lubricating oils. 3) The acids "draw" more water, to form more acid, to draw more water, in a never ending "vicious cycle" inside the engine.

THEORY IS PUT TO THE TEST

Having formed a theory, Win, as a scientist, had to prove it both in the laboratory

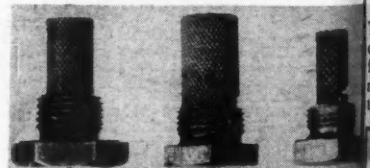


ignition, less engine wear. At current rate of wear, this engine should last until metal fatigue overtakes it. Read this story for full details and figures concerning the magnesium alloy acid neutralizer.

Engineer Win Johns and His Test Car, The Famous '40 Ford. Still "better than new" after 153,000 miles, this car proves that destructive corrosive acids can be stopped. The results of Win Johns' experiments: after 153,000 miles the '40 Ford runs smoother, with less gas and oil, more power, longer filter life, better

and in the field. Working in his own lab and on his own car (the now famous 1940 Ford which after 150,000 miles is still good as new) he tried the obvious step first. He added alkali agents such as potash to the oil on the assumption that an alkali would neutralize the acids. They did, but he soon discarded this additive method because of the danger of the harsh alkali elements and because they tended to lose potency as they were used up. Then Win had a brainstorm . . . to use a "sacrificial" metal such as magnesium. An active metal like magnesium should react with acids before the acids could attack less active metals such as iron or aluminum. The magnesium would be "sacrificed" to protect the engine metals. The magnesium by itself did not work. Then tests were conducted to discover the best combination of magnesium and aluminum for maximum acid neutralization. Varying alloys were prepared and tested until the proper combination was found. With this alloy acid neutralizing action was found to be as much as three times more effective than other metal combinations. The neutralizing action was constant and there was no danger of excess alkalinity or loss of potency.

MAGNESIUM IS "SACRIFICE"



Here's proof that Magna-Power's magnesium alloy serves as a "sacrifice" to protect other parts of the engine. Acid action on Magna-Powers that have been in use for 3,000 to 10,000 miles is evident in this photograph. Magna-Power on left shows normal discoloration caused by formation of salts during acid neutralizing action. Although discoloration is usual sign of Magna-Power's effectiveness, pitted units (center and right) show how acids can destroy engine metals.

(ADVERTISEMENT)

AMAZING RESULTS ON ORIGINAL TEST

After 15 years the original 1940 test Ford has more power and pick-up than when it was new! Remember, it has never had special tune-ups, machining or special work of any kind other than installation of the MAGNA-POWER ACID NEUTRALIZER PLUG. No overhaul—nothing! (It was once dismantled for inspection.) And it has been subjected to as much as 10,000 miles without oil change.

According to AUTO AGE (May, 1954 issue) the engine "is absolutely remarkable. It idles down to 125 rpm as smoothly and evenly as a turbine and in almost complete silence. Stopwatch tests show that it will accelerate from 10 to 50 mph in 16 secs. At 70 mph (on the speedometer) there is plenty of throttle left and an impression of liveliness. The Ford... was dismantled at 117,000 miles, when bore wear was found to average .00095 inch, or less than one thousandth of an inch. The reader may draw his own conclusions." But that was Win John's own car, let's see what outsiders' tests show.

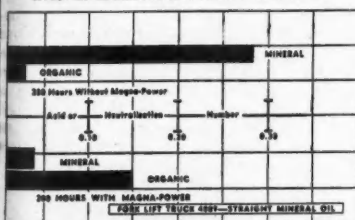
INDEPENDENT TESTS ON OIL

Last year J. A. Milteer, of Quitman, Georgia, ran an independent test to show the acid neutralizer's power to reduce engine varnish and sludge. Mr. Milteer covered 2,700 miles in his '53 Ford without the Magna-Power. He then drove the same distance with a Magna-Power. Both runs were made with Shell X-100, SAE 5-20 oil—a high detergent alkaline oil. Drain samples were then sent to an independent laboratory for analysis. The report by the Southern Analytical Laboratory, Jacksonville, Fla., showed approximately 1700% more sludge in the oil without Magna-Power protection, and almost complete elimination of resins and gums. Here are the actual figures:

	With Magna-Power	Without Magna-Power
Sludge:	0.3	5.0%
Resins and Gum:	None	0.5%
Sugars (reducing substances):	Trace	Present

(Reports #36,280 and #36,333)

EFFECT OF MAGNA-POWER ON ACID IN DRAIN OIL



This graph shows another typical example of how Magna-Power eliminates the harmful mineral (or strong) acids and allows a natural build-up of beneficial organic "detergent" agents.

FLEET TEST TELLS STORY

A three year test, covering more than 2,000,000 miles was started in 1949 by the Farmers & Consumers Dairy in Morristown, N.J. Fifteen of the 30 vehicles were equipped with Magna-Power plugs. The other 15 served as "controls" for comparison. According to Mr. Edward L. Hark, garage superintendent, engine wear was reduced by 82% on the Magna-Power trucks. Additional benefits included better oil and gas mileage and longer spark plug life. As a point of interest, the 15 original trucks were still giving "new" performance when they were traded because of body fatigue at 140,000 to 160,000 miles. This, despite the fact that they were engaged in house-to-house delivery and that unprotected engines never exceeded 60,000 miles in such service without rebuilding!

ENGINES WITHOUT MAGNA-POWER

Total Mileage	Wear (inches)	Wear-Rate (micro-inches per 10,000 miles)
*45,032	.01492	3310
45,700	.01114	2440
30,886	.01192	3860
45,918	.01344	2830

ENGINES WITH MAGNA-POWER

*125,482	.00606	485
65,321	.00284	437
25,712	.00218	848
45,117	.00333	740

(*These engines were taken from the same truck used by the same driver on the same run.)

ROAD TESTS PROVE MAGNA-POWER'S EFFECTIVENESS

Two recent road tests offer proof that Magna-Power helps keep engines in "new car" condition, while actually improving spark plug and cylinder compression.

ROAD TEST: NO. 104.9/3/54. '48 Plymouth owned by Anthony De Biase, Dunellen, N.J. Checking old Spark Plugs against new. At test, car had 71,867 miles, old plugs (out 2 months) had approximately 30,000 miles, new plugs had 2,800 miles. Both old and new plugs blasted and regapped to .025".

Acceleration Test: 10 to 50 mph (Speedometer)

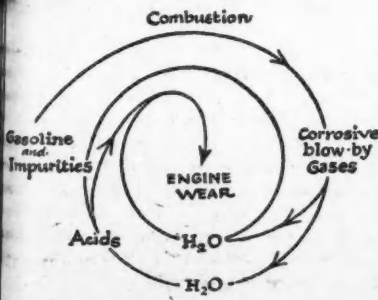
New 2,800 mile plugs	20 secs.*
Old 30,000 mile plugs	20 secs.*

(*Average of 3 runs)

TEST NO. 105: 8/28/54. '51 Ford 6 owned by Lawrence Vicentes, Dunellen, N.J., still using original plugs at 34,000 miles. (Magna-Power installed at 2,000 miles, 32,000 miles in service.) Oil consumption, 1 qt. to 1,000 miles. Spark Plugs (Champion H-10) blasted and gap set at .025", then tested on standard plug tester. Only 5 plugs tested since one was broken.

ACID FORMATION—THE VICIOUS CYCLE

Gases such as carbon dioxide, sulphur dioxide and trioxide are inevitable products of combustion in your engine. These gases combine with water to form corrosive compounds which destroy the metal parts of your engine. These sulphuric, hydrobromic and hydrochloric acids are all thirsty. That is, they tend to draw more water which draws more acids which draw more water—in a vicious circle which results in your engine being eaten away, robbed of its power and efficiency. Remember, theoretically the average car produces a pint of acid a day. Most of this acid is blown out the exhaust, but it takes ONLY A DROPLET to start the vicious circle.



Test #105 (34,000 Miles)

- | | |
|-------------|--------------------|
| 1) 110 lbs. | 4) 105 lbs. |
| 2) 105 lbs. | 5) 100 lbs. |
| 3) 115 lbs. | 6) Broken, no test |

Conclusion: Even with better than 30,000 miles, both sets of plugs "good as new"; both sets back in use. Actually we can furnish even more startling proofs than given in these typical cases.

CANADIAN GOVERNMENT TESTING BUREAU GIVES RESEARCH FINDINGS

Here's part of a report made by scientists of a Canadian National Research Group:

"Adding certain metals or chemicals to automobile oil will greatly extend its useful life. To the motorist this means that he may be able to drive 7,000 miles or more without changing oil, instead of the usual 1,000 or 2,000 miles.

"Several years of laboratory work have shown that the metals Lithium, Potassium, Sodium and Magnesium, or some of their salts or oxides slow down the oxidation that destroys and contaminates motor oil. The National Research Council suggests that a piece of one of the metals could be placed in direct contact with the engine oil by attaching it to the car's oil drain plug. . . ."

In other words, their findings corroborated Win John's findings. Neither knew of the other's research, although Mr. Johns was manufacturing the plugs at the time of the Canadian report. This coincidence gives added assurance that you can get maximum performance at less cost for as long as you own your car. Try Magna-Power at our risk. Money back—even years from now—if you are not "tickled."

OUR WAY OF DOING BUSINESS

Fill out the coupon at the bottom of this page and mail it to us today. Your order is filled the same day it is received. Remember, Magna-Power, only \$2.95 postpaid, is available for all American cars, trucks and tractors, as well as popular foreign autos. Magna-Power has been road tested and proven to be made of the most effective acid neutralizing alloy known to science.

EXPERIMENT WITH THE MAGNA-POWER NEUTRALIZER AT OUR RISK

If you are not satisfied with the way it works, send it back, at any time (years from now, if you choose), for an immediate refund.

Canadian orders filled from Toronto stock . . . \$2.95 each, tax incl. Canadian checks, money orders or cash accepted. Indicate year and make of vehicle with all orders.

JOHNS MFG. CO., Dept. MT-95, Middlesex, N.J.

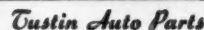
My car is a.....(make).....(year). Please send me, postpaid, a MAGNA-POWER acid neutralizer. I enclose \$2.95. I understand that it is sold with an unconditional guarantee of satisfaction or my money back!

Name.....

Street.....

City..... State.....

FOR YOUR MAGNA-POWER, SEND \$2.95 TO: JOHNS MFG. CO., DEPT. MT-95, MIDDLESEX, N.J.



102 West Main Street Tel.: 616/665-1100 Fax: 616/665-1101

Continental Mfg. Co.
Culver City, California

Year 5/1991:

On December 5th, 1956 at Orange County Drag Strip, Orange County, California, we tested, with our own competition roadster, powered with a 1949 Mercury engine, converted to develop approximately 340 HP x 4000 RPM, the Life-Time sports plug in competition with other top name brands of racing plugs with the following results:

Run #1	#1 other brand plug	107.00	HPW
" #2	Lifetime #5A	111.11	"
" #3	#2 other brand plug	106.72	HPW
" #4	Lifetime #5A	113.95	"
" #5	"	110.28	"

There were absolutely no other changes made during these two recent operations.

The above times were recorded on an electric timing device at the end of 1/4 mile acceleration from stand still. Fuel used on all runs was 93 Octane aviation gas.

TUSTIN AUTO PARTS

R. Anderson

Phil Cook
Co-Owner & Treasurer



● **INDIVIDUAL INSPECTION**—Each LIFE-TIME Spark Plug is tested for firing in oil and for resistance to 30,000 volts/CM.

● **SELF CLEANING FOR LIFE**— Confined gases exploding in chamber formed by multiple electrodes reclean arcing surfaces with each firing stroke.

allows overall cooler electrode temperature for greatly increased life. Hotter spark prevents fouling, yet the rotating and cooling effects minimize the common faults of burning, erosion, blistering and insulator failure. Compare this principle with the conventional 2-point spark plug design.

● **PLATONIUM-NICKEL ALLOY ELECTRODES**—Metallurgists' first major step beyond platinum aircraft plug electrodes. Arcing points of this material have continued to function after the equivalent of 120,000 car-miles.

● **SPECIAL SINTERED CORUNDUM INSULATOR**—Made of gem-like mineral which conducts heat 20 times better than ordinary porcelain. Special shape is designed to vaporize and exhaust wet carbon and oil.



NOW...

**ORDER REGISTERED SET
FOR YOUR CAR AT POPULAR PRICE!**

Dealers and Distributors: The LIFE-TIME Spark Plug is now in full production. Write for full details. Distributors: Please inquire as to status of your territory.

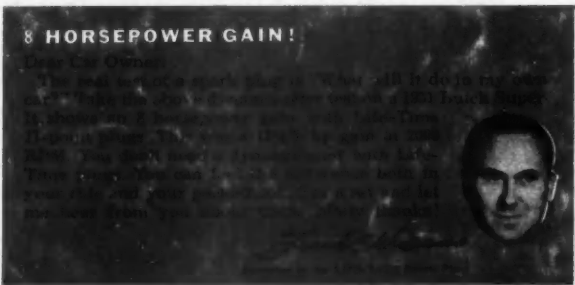
Before LIFE-TIME development, the spark plug was the most often replaced part of your car. Engineers agreed that "creeping paralysis," gradual electrode disintegration, carbon buildup, widening gap, could waste one gallon in ten. The LIFE-TIME Plug has now gone far beyond the life of the average set of tires, the average battery. This plug still fired clean, hot and steady at 50,000 car miles!

Most spectacular spark plug research breakthrough in 50 years allows us to include this unique and unprecedented warranty with every set of LIFE-TIME Spark Plugs. We GUARANTEE GREATER GAS MILEAGE - GREATER ACCELERATION - A MAJOR POWER INCREASE - OR YOUR MONEY BACK.

YOU RECEIVE BY MAIL

this registered set of **LIFE-TIME** Spark Plugs in proper series (heat range and gap) for the car you indicate in coupon. NOW AVAILABLE FOR **AMERICAN & EUROPEAN PASSENGER CARS, TRUCKS, BOATS, FARM EQUIPMENT, INDUSTRIAL ENGINES.**

8 HORSEPOWER GAIN!



**LIFE-TIME Spark Plug Division,
CONTINENTAL MANUFACTURING CORP.**
Washington Blvd. at Motor Ave.
Culver City 80, California

Gentlemen: Please mail postpaid.....set(s) (registered) of LIFE-TIME Spark Plugs in proper heat range and gap for my car at introductory price of \$1.19 per plug (Set of six, \$7.14, Set of eight, \$9.52). (Or send \$1 per set, balance C.O.D.) California residents add 3% tax.

Make of my car is.....Year.....

Model No. Cyl.....

I enclose \$..... (check, cash or money order)

Name

Address.....

City Zone State

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